ST. BARTHOLOMEW'S HOSPITAL JOURNAL

VOL LVIII JULY 1954 No 7

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Editor : ALAN G. SMART.

Manager : DAVID FAIRBAIRN.

Assistant : DOUGLAS CHAMBERLAIN.

Women's Representative : MISS N. COLTART.

Charterhouse Representative : PHILIP NORRIS.

July 1954

CONTENTS

Editorial 180

Letters to the Editor 183

College Prizes 183

Histochemistry and Medical Rersearch, by G. H. Bourne 187

A Cartoon by Chris. Wren 188

A Background to Medicine in Araby, by J. A. Tait 189

This England, by E. J. A. Alment ... 204

A Case of Gaucher's Disease, by R. G. Chitham and M. A. Pugh 205

Medicine as Recorded in Edward Browne's Travels in Europe, by John L. Thornton 207

Sport 211

Examination Results 211

Hospital Appointments 213

Book Reviews 214

NPB

An Office of NATIONAL PROVINCIAL BANK LIMITED is open, for the convenience of the Hospital Staff and Students, adjacent to the Hospital Wages and Salaries Office.

Hours of Business :

MONDAYS TO FRIDAYS 10—3 SATURDAYS 9.30—11.30

Manager : MR. F. H. J. MEAD

The Manager will welcome enquiries from members of the Staff and Students at St. Bartholomew's requiring banking facilities — satisfactory arrangements are available to meet the needs of those entering one of the Services or on taking up other appointments.

NATIONAL PROVINCIAL BANK Limited

NPB for service

MEDICAL SICKNESS SOCIETY

The ABC of PERSONAL INSURANCE

—or how to provide yourself with a complete scheme of personal cover in one policy at reduced rates with the

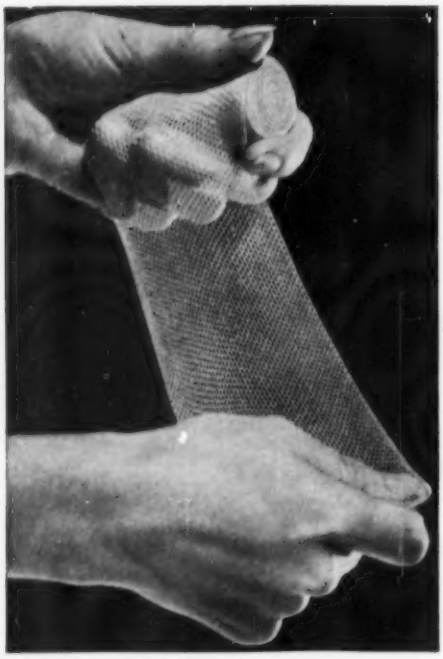
MEDICAL SICKNESS, ANNUITY & LIFE ASSURANCE SOCIETY LIMITED

7 CAVENDISH SQUARE, LONDON, W.1.

(Telephone: LANgham 2991)

Please write for particulars, mentioning this advertisement

When you are BUYING A CAR ask for details of the HIRE PURCHASE SCHEME of the MEDICAL SICKNESS FINANCE CORPORATION LTD.



Two-way stretch for firm, even support

In cases of sprains or weak joints a Lastonet elastic bandage can be relied upon for firm even support without restricting movement. The open net construction allows the air to circulate freely. In standard lengths of 5 yards when fully stretched and widths of 2½", 3", 3½" and 4".

Lastonet

ELASTIC NET
SUPPORTING BANDAGE

*Can be prescribed under the National Health Scheme

LASTONET PRODUCTS LTD., CARN BREA, REDRUTH, CORNWALL

THE NEW MALE HORMONE ESTER

T.P.P.-Organon

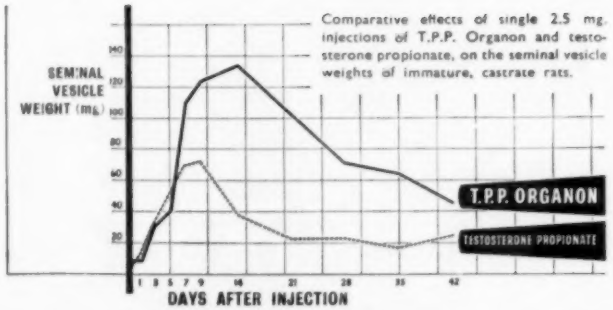
TESTOSTERONE **PHENYL** PROPIONATE

- LONGER ACTING AND MUCH MORE POTENT THAN TESTOSTERONE PROPIONATE
- FEWER INJECTIONS REQUIRED
- TREATMENT SIMPLIFIED
- COST LOWERED

Indicated in conditions where testosterone propionate has hitherto been employed, T.P.P. Organon is presented for subcutaneous injection, in the following strengths—10 mg. per c.c. and 50 mg. per c.c.

Packs: 3 x 1 c.c. ampoules. 1 x 5 c.c. vials.

Literature on request



Comparative effects of single 2.5 mg. injections of T.P.P. Organon and testosterone propionate, on the seminal vesicle weights of immature, castrate rats.

ORGANON LABORATORIES LTD

BRETTENHAM HOUSE, LANCASTER PLACE, W.C.2

Telephones: TEMple Bar 6785-6-7, 0251-2

Telegrams: Menformon, Rand, London

Ovaltine will help your elderly patients

'OVALTINE' is a wholly beneficial nutrient beverage. It is a nourishing and sustaining dietary supplement of acknowledged worth in helping to build up bodily strength to withstand the frailties and risks which may accompany the declining years.

Its concentrated nourishment—provided by malt, milk, cocoa, soya and eggs, and added vitamins—is in a form which even weak or impaired digestive systems will readily accept. When solid food cannot be taken or mastication is difficult,'Ovaltine' will prove an easy and convenient means of administering necessary nutriment.

Delicious, soothing and nourishing at all times, it is particularly advantageous at bedtime, since it helps to promote the conditions favourable to natural, restful sleep during which its restorative ingredients can be fully utilized by the body.

OVALTINE

Vitamin Standardization per oz.— Vitamin B_1, 0.3 mg.; Vitamin D, 350 i.u.; Niacin, 2 mg.

SAMPLE AND LITERATURE ON REQUEST TO A. WANDER LTD., 42 UPPER GROSVENOR ST., LONDON W.1.

M 391

A Superior Buffered Analgesic

'Alasil' Tablets, the improved form of salicylate medication, provide the efficent analgesia expected from their content of aspirin. Their superior acceptability, derives from their content of a reliable buffer which minimizes the tendency to gastric irritation sometimes caused by the use of aspirin alone.

Advantages

'Alasil' is an advanced sedative and antipyretic; it does not tend to induce gastric irritation; because of its high tolerability, it may be used for long-term administration even to those with sensitive stomachs, and to children.

Composition

'Alasil' Tablets contain the recognized antacid corrective, 'Alocol' (Colloidal Aluminium Hydroxide), which permits their sedative principle, acetylsalicylic acid, to exert its action with minimal risk of side-effects.

Indications

Symptomatic pain generally; rheumatism, fibrositis, lumbago, headache, dysmenorrhoea; dental pain.

Packs & Prices

To PHARMACISTS (*P.T. exempt for dispensing*) Standard size: 1,000 in 250 bottles, 30/8. 'Juvenile size: 375, 6/6; 750, 11/3; 1500, 21/6.

ALASIL JUVENILE TABLETS

Alasil 'Juvenile' Tablets specially sized for children, and neither coloured nor flavoured, are packed in tubes bearing dosage-for-age instructions.

Alasil

SAMPLE AND LITERATURE ON REQUEST TO A. WANDER LTD., 42 UPPER GROSVENOR ST., LONDON W.1.

New..

for the prevention or relief of Motion Sickness

'MARZINE' brand Cyclizine Hydrochloride, a new compound for the prevention or relief of motion sickness, is remarkably free from any tendency to produce untoward side-effects such as drowsiness, dryness of the mouth or blurred vision.

In clinical trials it was given to over four thousand steamship passengers, the majority of whom reported that the relief obtained was excellent. Similar results were obtained among air travellers. Where sickness had already occurred, 'Marzine' reduced or abolished the symptoms in practically all cases. Side-effects in all groups were no more than 4 per cent.

'MARZINE' is of distinct value, too, in the treatment of vomiting of pregnancy and is worthy of trial in the symptomatic management of Ménière's syndrome.

'Marzine' is usually given in a dose of 50 mgm. (one product) three times a day before meals for adults. For children, half this dose is advised. 'Marzine' is issued in tubes of 10 at 2/6 plus 6d. purchase tax and bottles of 100 at 20/- plus 3/9 purchase tax (prices subject to usual discount).

'MARZINE'

CYCLIZINE HYDROCHLORIDE

- leaves the individual alert

BURROUGHS WELLCOME & CO. *(The Wellcome Foundation Ltd.)* **LONDON**

PROTECTIVE CLOTHING

Whatever your requirements consult Charles Baker, specialists for over 60 years in supplying the needs of the Medical Profession.

WHITE LONG COATS in fully shrunk drill .. 25/10

WHITE JACKETS 3 patch pockets, fully shrunk 20/6

SURGEON'S GOWNS in special lightweight material 28/3

DENTAL COATS Top Grade 41/3

Write for price list. If unable to call, order by post. State measurements required and enclose 1/- *extra for Postage and Packing. Satisfaction Guaranteed.*

Charles Baker

& COMPANY LIMITED

137-138 Tottenham Court Rd., London, W.1

TELEPHONE: EUSTON 4721 (5 LINES)

The best

of the light ales

is a

WHITBREAD

RIDDELL'S ALL BRITISH INHALERS

ARE UNSURPASSED FOR BRONCHITIS, HAYFEVER, ASTHMA OR FOR PENICILLIN ADMINISTRATION.

The PNEUMOSTAT Electric Inhaler illustrated supplies sufficient atomised medicament for one or two patients at a time while a special model is available for up to six patients simultaneously.

AND THE POPULAR—

RIDDOBRON

• ASTHMA INHALANT •

Ten hand and electric INHALERS are available for Home Office, Clinic or Hospital use.

An illustrated coloured brochure of inhalants and inhalers suitable for all respiratory complaints wil be sent free on request.

• RIDDELL PRODUCTS LIMITED •

"THE LEADING HOUSE FOR INHALATION THERAPY"

RIDDELL HOUSE, DUNBRIDGE STREET, LONDON, E.2.

Telephone: BISHOPSGATE 0843 (3 lines) - - *Telegrams*: PNEUMOSTAT, BETH. LONDON

Whisper Ninety-nine

Every Doctor feels quite passionately about what he hears down his stethoscope; and if a colleague hears something more, or different, the fellow must be wrong; probably got fluff in his ear-pieces. It is, of course, a commonplace of the medical schools that students' stethoscopes transmit sounds quite other than those heard by their great white chiefs; and it is equally recognised that no doctor can hear as well with somebody else's stethoscope as he can with his own. In this often lifelong partnership, the instrument develops a one-man-doglike devotion to its owner; or perhaps it is the other way about. Its form has changed since René Laennec (as those old enough to have read "Rewards and Fairies" will remember) devised his little wooden trumpets and heard for the first time . . . . .

We apologise for leaving this subject in the air, so to speak; but space is limited. You can read the whole delightful essay, however—and half-a-dozen others equally light-hearted and informative—in the collected "Prosings of Podalirius". Send a p.c. for your copy to the address below.

Vitamins from

VITAMINS LIMITED

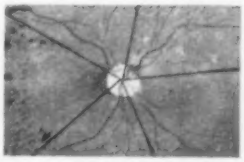
Upper Mall, London W.6

BEMAX VITAVEL SYRUP VITASPRIN

BECOVITE BEFORTISS PREGNAVITE COMPLEVITE

RETINOL CREAM CHOLINVEL ETC

HAMBLINS MINIATURE SLIDES



These miniature lantern slides in full colour are intended for teaching and study. They comprise, in addition to a wide range of external diseases of the eye and normal and abnormal fundi, the special series described below.

The John Foster series of Comparative pictures of Fundus changes of General Diagnostic Significance.

Made to the suggestions of Mr. John Foster, of Leeds, each of these slides presents simultaneously several conditions which may cause confusion in diagnosis. The five slides forming these series are as follows:—

M.F. 29. CERVICAL ARTERIOSCLEROTIC CHANGES

Shewing: Physiological cup
Myopic conus
Medullated Nerve Fibres
Pseudo-Papilloedema.

M.F. 30. PIGMENTARY CHANGES

Shewing: Blonde Fundus.
Average British Fundus.
Mediterranean (Tigroid) Fundus.
Negro Fundus.

M.F. 31. DISC CHANGES

Shewing: Primary Optic Atrophy
Secondary.
Papilloedema.
"Cupping"
(Consecutive Optic Atrophy) Retinitis Pigmentosa.

M.F. 32 HAEMORRHAGES

Shewing: Retinal Haemorrhages from:
Nephritis.
Hyperpiesis and
Diabetes.
Blood Disease.

M.F. 33. DETACHMENTS CHOROIDITIS.

Shewing: Myopic Detachment
Melanomatous Detachment
Acute Choroiditis
Colloid deposits. (Tays Choroiditis).

The entire collection together with a daylight viewing apparatus may be seen at Hamblin's showrooms at 11-15, Wigmore Street, where it will be gladly demonstrated.

THEODORE HAMBLIN LTD
DISPENSING OPTICIANS
15 WIGMORE STREET
LONDON W.1

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LVIII. JULY 1954 No. 7

OVER TO CHARTERHOUSE

To sell an article nowadays it has to be advertized. Most firms will agree with this. In addition, the article being sold must be good. Potential purchasers flock to the grocers when free soap coupons are sent to them; or when they see a delicious dish colourfully magnified on a large hoarding, they will immediately have a craving for it. Most purchasers are satisfied.

In contrast is the hungry medical student seen ascending the stairs from the Refectory, notably on Fridays. Full of expectation I have seen him enter the Refectory aching with hunger and salivating at the thought of food, only to see a menu on which there is the most disappointing display. One particular dish there may be that is worthy of his appetite. On asking for it, he is told that either it is not ready for another half an hour, or that it has already all gone. Downhearted he again scans the menu, his face drops, and he turns to leave the Refectory with an empty stomach.

It is a long way to Charterhouse, and normally no person of reasonable I.Q. would even have entertained the idea of walking so far for his dinner; but that is what confronts our student. The weather may be at its worst — but he still goes, he may have to queue at Charterhouse—but he still goes; once there he may be confronted with a similar menu—he still goes. Many a West-End cafe has been well patronized by the people 'next door', not so much because it an excellent repast, but because of its proximity. I used to know a man who had a five mile walk to school in his childhood, his journey was a necessity. Local village preachers walk miles to deliver a sermon; they receive their spiritual reward. Some members of the Hospital Sailing Club travel over one hundred miles into Essex and back every weekend; they enjoy sailing. But what I have often asked myself is to be gained from walking 'over to Charterhouse'? The scenery en route could never be underrated. The journey often means passing the Bank, which may bring to mind columns of figures in the red, and may be a life-long liking for tripe or pigshead is dispelled after seeing the way it is handled in the Market. Besides there is the return journey to be made afterwards: and return journeys can be so dull. I always envy Sir Francis Drake in that by sailing right round the world, he obviated the necessity of a return journey.

A possible explanation of such a painstaking operation is that there is a psychological effect. I remember reading in a textbook of Pharmacology that much of the pleasure to be gained from smoking a pipe lay in the preparation. Perhaps the journey to the hostel prepares the appetite, the more pleasant appearance of the College Hall makes the food more succulent, and the journey back aids the digestion.

Whatever the cause of this daily trek, it does seem out of place in a community such as ours that one still has to search so far for the wherewithal to feed. Is the fault in ourselves or in our stars that we are underlings at the mercy of the whims of fancy.

Memorial Services

The *Journal* was represented at the Memorial Service for the late Professor Frank Lloyd Hopwood, which was held in St. Bartholomew-the-Less, at noon on Friday, 21st May. The service began with the 121st Psalm, which was followed by the lesson read by Mr. R. S. Corbett. The address was given by Professor A. Wormall, who briefly recounted the exemplary life of Professor Hopwood as he and his associates had known it. An appreciation by Dr. Malcolm Donaldson appears elsewhere in this edition of the *Journal*.

Rid'em Cowboy

One of the *Journal's* readers is a Texas citizen, but his address is in England, and he is also a British citizen. To explain this paradox, Dr. Philip Gosse of Cambridge has written to tell us how it happened. An article of his in an American Literary Journal was read by the Governor of Texas, who, liking it so much, stated that a man who could write like that should have been born in Texas. As reincarnation in this instance was out of the question, the Governor decided upon the next best thing —that Dr. Philip Gosse should be made an Honorary Texas Citizen. An impressive document with the golden seal of Texas State was sent, signed by the Governor himself and the Secretary of State. This endows all the rights, privileges and emoluments of "such office" upon the Hon. Citizen.

We are reminded of a College Professor who had recently returned from America, lecturing in a five gallon hat, and displaying the badge of deputy sheriff of the County of Houston.

The Good Old Days

It is hard to realize that less than a half centry ago the Hospital had a very different appearance. Not only have buildings changed but also uniforms and layout of departments. Of this we have been informed by Dr. M. B. Reichwald who writes: "Here is a photograph of the Outpatient Department, date 1906—1907, discovered during spring cleaning operations on my desk. Sister Surgery is on the left and with her Nurse Garnett. The names of the porters I cannot remember, though their faces are still familiar. The names on the board in the centre are Clarke and Forrester of the Bowlby firm. On either side of the porter's head are boards, one of which seems to bear the names of Berris and Glenny of the Bruce Clark firm. The other names I cannot read."

No Explanation

It was very gratifying to see a photograph of the "Square", with its trees just budding

and looking beautiful, in one of the Evening newspapers some while ago. The picture showed two nurses walking in the direction of the Henry VIII gate, and the caption read —"At Bart's". These two words would seem a very inadequate explanation of such a picture, and we can only hope that it was included because of its artistic merit.

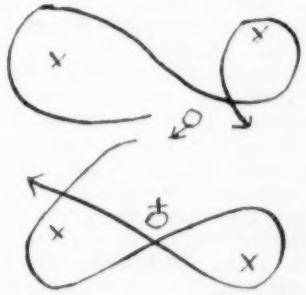
No Foundation

A pre-clinical student when asked about Rahere quite innocently asked who he was. The story of Rahere can be found in many of the histories of the Hospital, but for the present we will be content with publishing a picture of our founder.

This photograph is one of a small statue presented to Mr. Hayes—Clerk to the Governors—when he retired some years ago. In reality it is only about twelve inches high. We trust the artist was aware of the anachronism in Rahere's hand, and thank the photographic department for the reproduction.

Fever

(Top)



This is a tracing: a better drawing would have the X's as the four corners of a square and the arrow-heads at the centres of its vertical sides.

Bart's students and nurses have many hobbies, some energetic and some idle. One of the most exhausting (if we exclude rugger and water polo) must be Scotch Hopping, which has become a hebdomadal habit in Little Britain. It is like an undulating fever appearing on Tuesday evenings and at important Balls. For enthusiasts an original reel is outlined above; it may be necessary to turn the page on its side or upside down before the moves can be fully appreciated.

JACKY HORNER

May an old friend and fellow-student be permitted to add a few words to the excellent obituary notice of N. G. Horner which appeared in the May number of the *Journal*.

As a student at Bart's from 1899 onwards, one remembers Jacky Horner as a lively, amusing, and popular young man, fresh from Cambridge. He was keen on games, a good cricketer, and a courageous, if not very proficient, rugger player. But it was as an amateur actor he excelled, particularly in the part of a young lady, indeed he was one of the stars of the amateur Dramatic Society. In those benighted days, before the happy incursion of women students, all

the female parts were played by men, the very best of all, after of course R. C. P. Berryman, was Jacky Horner. These two lady impersonators were our only "actresses" who could be relied upon to sit down on a chair or a victorian sofa and resist the masculine urge to hitch up their skirts as a man does the knees of his trousers.

As Hugh Clegg truly said, Horner had a keen sense of humour, often spiced by a delicious dash of malice. He used to tell this story against himself. Somebody once asked what induced him to abandon clinical medicine and become a whole-time medical journalist. His reply was as follows, The morning after he qualified, as he strolled along Kensington High Street, feeling very much at ease in the best of best worlds, some sort of accident took place: a man was knocked down in the road, and the inevitable ring of gloaters had quickly gathered. Jacky, thinking his help might be needed, elbowed his way through the crowd to find a policeman already kneeling by a prostrate figure, applying first aid. Jacky, in his rather high-pitched "refined" voice said "Officer . . . I am a medical man." To which the policeman responded by giving him one glance, then cocking a thumb over his shoulder, shouted "'Ere, you 'op it," and the shame faced doctor hurried away determined never again to engage in any sort of practice.

Although Horner and I were fast friends for more than fifty years, I only saw him from time to time after we qualified. Usually it was at the Thursday meetings of the Fountain Club, of which most friendly intimate fraternity he was a regular diner and beloved member. Also he was generally to be found at another club, the Savile, where for many years he had his own room and it was his home until, owing to increasing ill-health, he was compelled to retire into a hospital.

PHILIP GOSSE.

AN APPRECIATION

The sudden death of Professor Hopwood came as a great shock to me, as it will to his many friends.

I first met Hopwood when he was assistant Physicist to the hospital, when he helped me with some experiments I was doing in connection with "Blood Pressure". From that time on for over thirty years he was to be my "Guide (in all things physical), Philosopher and Friend". Never was there such a staunch friend.

Whenever he thought my point of view in any controversey (and there are always some in any virile hospital) was the right one, he was prepared to discuss it with my opponents and to back me up, but always equally prepared to give the arguments against such views and to expose any fallacy, in short he was "judicial" in all he said or did. Perhaps the happiest years of my life were those in which I took a minor part in helping Hopwood and Canti in their many combined works, such as planning the deep X-Ray Department with its million volt apparatus, those tissue culture experiments, and many others. To watch those two brilliant brains at work, was a privilege and a pleasure.

His work for Cancer Research, both in the hospital and in the British Empire Cancer Campaign, of which he was a founder member, is well known to everybody interested in that disease, but here I only want to refer to him as a man. He was never heard to say an unkind word about anybody, although he may have been "judicially critical" about their actions, and I have never heard an unkind word said about Hopwood. Never "self seeking", indeed he was selfless in his effort to help other people, he was the "Whitest Man" I ever knew. Although his active life was over at the time of his death the loss to the hospital of such a sound source of good advice is very great.

MALCOLM DONALDSON.

DEATHS

BOWEN, John Edmund. On April 19th, aged 69. (Qualified 1921 at Middlesex and Bart's.)

GOULD, H. V. On April 14th, aged 78. Qualified 1902.

SHEEDY, Thomas Patrick. On May 4th. Qualified 1910 (Cork and St. Bart's).

COLLEGE PRIZES

TREASURER'S PRIZE

Awarded to: A. R. M. Al-Adwani

Certificates: P. Farren
L. J. Farrow
D. J. Tooby
A Warrander

Staph Conference

"You are old, Father Staph.," the young coccus said,
"And your skin is remarkably rough,
"Yet you seem to survive despite all the drugs,
"What has made you so awfully tough?"
"In my youth," said the Sage, "I'd occasion to meet
"Some red prontosil powder, one day,
"So I founded an abscess and went off to sleep
"Till the plasma had washed it away."
"But times have now changed," his junior said,
"And the antibiotics are here,
"Pray how do you manage to keep quite so fit,
"While the rest of us tremble with fear?"
"I lived as a lad," the old staph. made reply,
"On a diet of agar and broth;
"And if you can stick that you've little to fear
"From the worst pharmaceutical wrath."
"You are old," said the germ, "one would hardly suppose
"That your toxins were quite at their best
"Yet you're giving your host the most terrible pains,
"Don't you feel that it's time for a rest?"
"Just a day or two back," the old fellow then said,
"A young leucocyte said much the same,
"But a small dose of toxin—just given in fun—
"And he quite lost his taste for the game."
"With your knowledge of life," the young germ went on,
"Is there any advice that you'd give,
"On National Health and susceptible hosts
"And the pleasantest places to live?"
"The young," said the old chap, "want always the same,
"More security, pleasure and ease,
"Pray kindly remember your object in life
"Just be off now, and cause a disease!"

CASES FROM DR. PENRY ROWLAND'S NOTEBOOK

Cold Welcome For Baby

Urgent call out at 5 a.m. by ancient old-type midwife. Hasty arrival in 10 or 12 minutes to unlit house—no hot water no fire! Midwife seated at the top of the stairs wringing her hands.

"Where's the patient, nurse?"

"In the toilet."

"Is the baby born?"

"Yes."

"Where."

"In the pan."

Quick orders to helpless neighbours for hot water, fires, gas, lights. Mother removed to better quarters on the landing floor. The baby and placenta found by candle light in two inches of cold water.

"See to the patient, nurse!" "Hot blankets and hot tea."

Baby had apparently not breathed, but occasional heart-beats were heard. Artificial respiration carried on by the doctor in an unprofessional temper. Pulse improved in frequency and artificial respiration was continued. After nearly a quarter of an hour, the baby's chest was seen to move. A minute later there were three or four breaths taken. In twenty minutes breathing was regular. Baby was presented to her mother—now warmed up.

There followed a few words with the midwife.

Next day. Everything normal.

Sequel: Fourteen years later baby was Captain of the school hockey team

Aphrodite and Hermes

And the next object to diagnose was brought in on a stretcher by two policemen.

Question No. 1. "Any serious injuries?" "No" "Was the patient very ill?" No." "Or drunk?" "No." "Upset emotionally?" "Yes—very much."

"What did examination reveal?" "All attempts at examination were violently rejected—until the two indignant policemen had been sent away."

"After examination what was the first question put to the patient?" "Are you a man or a woman?"

"And the answer?" "Floods of tears—and the statement that he or she had never known—and a pitiful story followed—of alternating boys' and girls' schools, dismissal from jobs, arrests, lock-ups, friendlessness and misery.

Carried off, with a note, to reply to a charge of being "drunk and disorderly".

A very unsatisfactory case—half a century ahead of its treatment.

A Psychologist Addressing A Class

Gentlemen!
At times when noon's brilliance thrusts past the great rock
In the measureless deeps of Loch Ness
In a sequence of loops the unclean Jabberwock
Greets the surface with slimy caress.
Then he's gone!
As if slain by a gleam of a dim vorpal blade
That must be obeyed.
(Here Patient enters in bath chair, and soon silently acts out a drama)
So—across this unruffled and trouble-free brow
Move wavelets, mere shades of emotions
Recalling in silence the fears of a child,
Dim aisles, half remembered devotions,
The well muffled dark where confessions are heard
Where by whispered pronouncements the heart strings are stirred.
Watch the head bowing low and tense hands interlocked
The eyes that are veiled, wordless moving of lips
They each add their hints from a soul sadly shocked
In this drama that's still in eclipse
There! it's over!

(Exit Patient back stage)

Well Gentlemen
We've been watching a film on an unlifted curtain
With all the lights on and sounds off—that is certain.
Have we learned very much of the plot? Not a lot.
Of the actors and decor, we confess rather less
And no aid was forthcoming from smart dialogue
So perforce we remain in a fog or, if you like, smog.

Gallipot

Mr. John Langton is beginning his very stately round.

"I should like you to see a new case first, sir."

"What's your diagnosis?"

"Well, you had better read the G.P.'s notes, sir."

Patient has been suffering from Tapeworm for 2 or 3 years. He was advised to get a pound gallipot, put a little sugar in it, place it at night under the anus and was assured that the worm would come down. He carried out the instructions, woke in the small hours in violent rectal pain and could not find the jar anywhere."

"Where is it now?"
G.P. says it is occupying the Pelvis."
"Where is the Doctor?"
"He's here."
"Well, doctor, do you believe this man's story?"
"Yes, Mr. Langton."
"Why?"
"Well, I've felt the gallipot in situ.'

Patient is turned on his side and finger introduced. Amusement changes to amazement on the surgeon's face—he takes his dressers to mid-ward. "It is there, gentlemen, what can we do about it? Midder forceps and blunt hook."

Every attempt was made locally without any result, so Laparatomy was tried but there was no movement possible and patient diied of "Acute Obstruction due to Foreign Body".

P.S.—Removal of Coccyx or Symphysiotomy might have been tried.

Diagnosis of miliary tuberculosis: A normal chest X-ray is often thought to make this diagnosis unlikely. The diagnosis was made by chest X-ray, taken up to 14 days before death, in only 18 of 52 children proved to have the condition (Emery and Lorber 1952). Choroidal tubercles were seen in 25 of 48 cases in the same series. Choroidal tubercles are thought by many to be a feature of tuberculous meningitis rather than of miliary tuberculosis, although Still had written (1927) that tubercles of the choroid are rarely found in tuberculous meningitis if uncomplicated by miliary tuberculosis, whereas they are found in the majority of cases of miliary tuberculosis. Illingworth and Wright (1948) found choroidal tubercles in seven of 14 cases of miliary tuberculosis without meningitis and in 18 of 28 cases with meningitis. Thus choroidal tubercles are of the greatest importance in diagnosis now that effective treatment of these conditions is available; their presence in a patient with tuberculous meningitis indicates that there is miliary tuberculosis also which seriously affects the prognosis. Perhaps I may presume to add to Sir William Osler's aphorism; "One swallow does not make a summer but one tophus makes gout, one crescent malaria, and one choroidal tubercle miliary tuberculosis."

The Abuse of Atropine in the Treatment of Acute Pulmonary Oedema: The rationale for the administration of atropine with the morphia for the treatment of this condition presumably stems from a desire to reduce secretion from the bronchial mucous membrane. But this pulmonary oedema is, as far as is known, a passive transudate in the same way as is peripheral oedema. Thus atropine can do no good; it may do much harm because the tachycardia which follows its use is the last thing desirable in this emergency.

Chest Sounds

When bronchophony and pectorilopuy—increased clarity of spoken and whispered sounds respectively—have been demonstrated to them, most students find the deviation from normal much easier to spot than is the case with bronchial breath sounds. The three sounds have the same significance and where there is bronchial breathing there is also broncophony or pectoriloquy. In certain cases of consolidation of the lung, one of these two signs may give the clue to diagnosis when the breath sounds are normal or cannot be heard at all.

BIRTHS

HAIGH, on May 7th, to Sandra and Dr. Adrian Haigh, a daughter, (Joanna Dorothy).

HEYLAND, on April 2nd, to Joanna and Dr. Ralph Heyland, a son.

MAITLAND, on May 12th, to Marian, wife of Dr. R. I. Maitland, a daughter.

MATTHEWS, on May 6th, to Jean and Captain P. D. Matthews, R.A.M.C., a daughter (Jane Linda).

KINNEAR, on May 19th, to Jean, wife of Dr. Angus Kinnear, a sister (Fiona) for Alistair and Neil.

HISTOCHEMISTRY AND MEDICAL RESEARCH

by G. H. BOURNE

Histochemistry is regarded by many as a recent development in research but in fact it is a very old one. During the 19th century the first histologists were greatly interested in the chemistry of the objects they could see in cells but the development of the dyestuffs industry and the application of dyes to the staining of the cell focussed attention away from cell chemistry and on to cell morphology. In recent years, however, histochemistry has become of greater and greater importance as a research tool. Histochemistry may be described as the microscopical localization of specific chemical substances within organs and tissues; cytochemistry, on the other hand, refers to the localization of these substances within the cell. At the cytological level diffusion of reaction products may lead to erroneous conclusions as to the localization of a particular substance in the cell but this becomes of less importance at the histochemical level and for this reason the results of histochemical investigations are more reliable than those of cytochemistry. Some histo-cytochemical methods have been in use for a long time, e.g., those for glycogen and Nadi oxidase (now known as cytochrome oxidase) but the development in the last 10 or 15 years of the technique of autoradiography and of new methods for demonstrating the localization of enzyme activity have given a great fillip to histochemical investigation.

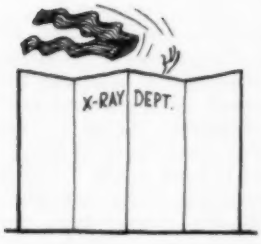
Autoradiography depends upon the use of radio-active isotopes of certain elements as "tracers". The compound containing the radio-active element is given by mouth or injected into an experimental animal or a human being and after a suitable period the animal is killed and one or more pieces of tissue taken or, in the case of the human being, a biopsy specimen is removed. The tissues are then fixed and sectioned and mounted in association with some photographic film. This may be done in a number of ways—by mounting the section directly on a photographic plate; by splitting off the emulsion from a plate and laying on top of the section (special stripping emulsions are available); by melting photographic emulsion and pouring it over the section or simply by pressing the mounted section against a photographic plate or film. Such contact between section and emulsion is allowed to continue for some time, i.e., about 6 days for radio-iodine and about two weeks for radio-phosphorus. The emulsion is then developed in the usual way and the section may be stained before or after being brought into contact with it. With the first three methods the section and emulsion remain in contact after development of the latter, and are mounted together, usually in balsam or other standard mounting medium. The radioactivity of the isotopes blackens the photographic emulsion and black granules appear close to the sites of isotope concentrations. For various reasons the resolution obtained with this technique is not very good, i.e., it is possible to discern without much difficulty which group of cells in a composite organ are most active in concentrating any particular isotope but it is more difficult to localize in any particular cell where the locus of concentration might be. Despite this difficulty, however, some workers have obtained autoradiographs which show a concentration of radio phosphorus in chromosomes.

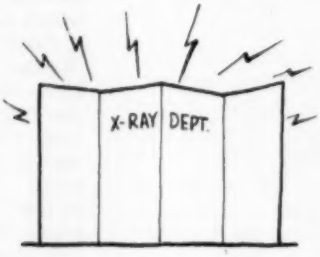
Autoradiography has already been used in the study of bone growth, of normal and pathological thyroid function, of cartilage physiology and a host of other problems. Up-to-date, the technique has been limited by the fact that only simple compounds of radioactive elements have been available (e.g., radio-iodine was available as potassium iodide) but now more and more organic compounds containing radio-isotopes are becoming available. Examples of these are glucose, vitamin C, thyroxine and even cortisone and many interesting results will no doubt follow from their use.

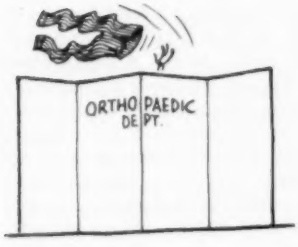
IN

ORTHO PAEDIC
DEPT.

X-RAY DEPT.


X-RAY DEPT.


X-RAY DEPT.


ORTHO PAEDIC
DEPT.

ORTHO PAEDIC
DEPT.

OUT

A BACKGROUND TO MEDICINE IN ARABY

by J. A. TAIT

Galen died in 200 A.D. Rome fell in 410 A.D. Between these historic dates world events moved in a manner that made it possible for the centres of medical learning to be carried into the mystical East.

For the Roman Empire, disorder was the key-word to the third century. With 6,000 miles of frontier from the Euphrates to Carlisle, with the Persians to the East beyond the Euphrates and the teeming tribes of Germany to the North, its defences were everywhere vulnerable. The Franks broke into Gaul; the Allemani into Northern Italy. On the frontiers rebel generals and barbarians weakened the Empire from without. Great as was this weakening, it was of even more significance that the inner structure was crumbling. The Empire bore the burden of the pillage of the provinces, the reaping of the slave harvest had left the human soil bitter; Sulla's furious vengeance on Asia was now receiving its inevitable reward. A thousand slaves were sold to build a bath and a dozen more for a silk toga, and a city ravaged to provide a show of beasts bought at infinite expense to satisfy the appetite of a softening nation. Slaves became short, land went out of cultivation, and the theme of Greece was repeated. Full lands were empty. Labour was scarce, law and slavery forced people to work at trades they despised, plague, famine, and heavy taxation, roads going out of repair and so limiting trade—all these spelt decline. "The curse of the Empire," Longinus said, "is want of spirit." All energy was repressed, the people were over-governed; "Solon made Athens by setting enterprise free; the Roman civil servants wrecked the Empire by killing initiative".

From about 60 A.D. the Christian Church had won a position for itself as a thorn in the side of Roman authority. Persecution had neither religious conviction nor ecclesiastical organisation behind it. Persecutions were largely local and arose from no conflict of Faith but from the lowly motive that followed the idea that the Roman Rule was that of no authority save that of the Imperial Government. Since Christians would not always obey the edicts of the Government there were persecutions; sometimes horrifyingly severe as in the reigns of Decius (250 A.D.) and Diocletian (300 A.D.) sometimes near tokens of authority. But the Christians would not compromise, and the massacres, far from extinguishing the Church had only embittered its leaders. The situation is well summed up in the words of Beza to the French King many centuries later: "It belongs to the Church of Christ to receive blows rather than to deal them; but your Majesty will remember that it is an anvil which has worn out many hammers."

Athens and Rome fell and the lamp of Western knowledge burned low. It might have been extinguished had it not been for the Prophet Mohammed. The pastoral warriors who were his followers played a great part in preserving what was left of that knowledge. They rescued it from forces working in the world to destroy it. The lamp spluttering to keep alight had almost been put out when Alaric entered Rome in 410 A.D., and the great centres of learning had gone toppling like nine-pins before the barbarous hordes.

Apart from the decline of Roman power, there were other factors that contributed to the birth of the Dark Ages. One of these was the Great Plague of the sixth century, a plague that wrought havoc throughout the whole Roman world and had St. Gregory the Great, leading a vast procession from the Church of Saints Damion and Cosmos chanting a sevenfold litany against the evil. Another, and a very important one was the spread of Christianity through the Empire. If any one thing can be said to have brought down the axe upon the pursuits of learning, it was this. At first sight such a statement seems paradoxical, for Christianity and learning, religion and wisdom, are closely linked in our minds. But in the early centuries, Christianity taught without comment the love of man for man, and told of the heaven that was to be sought through practical virtues, and what is perhaps even more important, led the convert to believe in the nearness of the Final Day. With the result that man's mind was filled with thoughts of death, judgment, heaven and

hell. By means of those practical virtues so frequently taught him, he was to purify his soul from his evil body and prepare himself to face the world hereafter. All knowledge other than that which made a man "wise unto Salvation" was not only useless but a dangerous and subversive influence to lead him from the way where all things were "counted dung but to win Christ". His encyclopaedia was the Bible wherein all law and knowledge that man ever needed to know. To know more than God chose to show man through the Bible was blasphemy.

Such was the restraining and crippling influence of Christianity upon man's natural curiosity, and such was its strength that it held the seeking intellect of man in bondage for more than a thousand years, until such men as Bacon and Descartes freed man from the chains of Providence and asserted the supremacy of reason and the invariability of the laws of nature. The decline of the Western world is not without significance to the growth of the Mohammedan world, for, this could not have occurred but for the decline of the West.

Arabia (not yet known as Araby) before the birth of Mohammed, was peopled by a rough and primitive race, not unlike their present-day successors, the Bedouins. Wandering all their lives, engaged in bitterest tribe warfare and the inevitable vendetta. The weak and sick went down before the strong, cunning and healthy. Primitive indeed they were, but they were also intelligent, resourceful and extremely courageous, and it was these qualities that bought for them lands from Spain to Samarkand, once the miracle of their unison had occurred. There were two qualities possessed of these hardy people that were to play an important role in the story unfolding. They had a great language of which they were immensely proud, and even nowadays they praise God "Who created the Arabic language, the best of all languages". They also had the gift of observation which was to make them good chemists and in the realms of medicine reliable clinical recorders. Almost the whole of pre-Mohammedan Arabia was composed of these scattered warlike peoples whose allegiance was to their petty chiefs and who knew no authority but this. But there were parts of Arabia adjacent to the Persian and Roman Empires (the kingdoms of Híra and Ghassán) where the civilisation of their neighbours had begun to influence the Arabs and to give rise to some notion of knowledge, of advancement, of science and indeed to open their eyes to the possibility of improving themselves through new knowledge. But this was the exception and not the rule.

There must have been doctors in Arabia from earliest times, but quite what their status was is uncertain. They were doubtless more magicians thans doctors and their powers of healing tinted with those of the supernatural. They must have had some skill in curing the war wounds so frequently acquired by their warrior patients, and in dealing with the everyday diseases that desert conditions inflicted.

The earliest record of a doctor of this period is by the biographer al-Qífí—he is one al-Hárith—a contemporary of Mohammed who had completed his studies at the great medical school at Jundí-Shápúr in Persia. His knowledge, if we are to believe the biographers of later centuries, was restricted to an understanding of the principles of hygiene which were fairly sound as far as they went.

It is probably fair to assume that there were a few competent doctors trained at medicals schools outside Arabia (mainly at Jundí-Shápúr) and attached to the courts of the more important minor kingdoms. Out in the desert medical practice was probably left to the hereditary magical healers.

The years that include the life of Mohammed and the rule of his immediate successors, the four Orthodox Caliphs differed greatly from the earlier period in matters of Theology, ethics and politics, but there was very little difference in the state of knowledge as regards science and medicine. That medical science was beginning to be considered important is clearly shown on looking in the Koran and in the 'Tradition of the Prophet'.

"Teach science which teaches Fear of God; he who desires knowledge adores God; when he spreads it he is giving alms; he who has it becomes an object of veneration and goodwill. Science protects from error and sin; it lights the road to Paradise; it guides us through the pleasures and pains of life; it is an ornament amongst our friends and a shield against our enemy. Science is the remedy for the infirmities of ignorance, a comforting beacon in the night of injustice. The study of the sciences has the value of a fast; the teaching of them has the value of

prayer; in a noble heart they inspire the highest feelings, and they correct and humanise the perverted."

The Koran (Chapter V, v.35) reads, "God has not inflicted disease upon us without at the same time giving us the remedy". It would not be fair to quote this verse from the Koran without writing that the Prophet subsequently limits this broadminded observation by restricting methods of treatment to three. The administration of honey, cupping and the actual cautery, and he recommends his followers to avoid or make sparing use of the last of these. He mentions certain therapeutic aids which must have been the standard pharmacoepia of those days. These include camel's milk, fennel flower, aloes, antimony, manna, and the ashes of burnt matting; and the diseases in which these are to be used are headache, migraine, ophthalmia, leprosy, pleurisy, pestilence and fever.

In 632 A.D. Mohammed died and obedient to the voice of their Prophet the Arabs went forth to conquer the world for Mohammedanism. A miracle had been performed: a country of pastoral warriors who had for centuries warred against one another had been united and inspired with a common Faith which carried them from the narrow confines of their land to become masters of half the then known world. Through their conquests they came to exchange the goatskin tent for marble palaces and the hoof-mark in the sand for learned texts, but this transition took time and in the meantime it was a horde of wild and ignorant barbarians who flooded through Persia, Syria, Egypt, North Africa and Spain. Ignorant barbarians mistaking salt for camphor and finding it insipid in their food, exchanging gold for silver—the yellow for the white—and selling priceless objects for nothing more than a thousand pieces of money because they could think of no number greater than a thousand.

The conquests were rapid and in the century following the death of Mahomet there is no evidence that the Arab invaders took any notice of the accumulated knowledge contained in the civilisations they overran. They came into contact with the more intelligent peoples who populated their new lands and we may postulate a naturally inquisitive people beginning, once the stress of fighting was over, to take a serious interest in the superior state of knowledge of those that had become their servants. An envy for the better life perhaps. And we can understand a demand arising for the sources of their knowledge. And then in the middle of the eighth century we find the great stream of Greek, Egyptian, Roman and Syrian learning beginning to flow through the gates of the new Baghdad and after translation, on out to the whole Mahommedan world.

The period of acquisition of the knowledge from the old civilisations was the period of the Abbassid Caliphs, but before starting upon the history of that important era, a few more words about the conquests. To say that they were rapid is a horrible understatement, they were torrential. Mohammed died in 632 A.D. Syria was invaded in 634 A.D. and subdued in two years: in 637 A.D. Persia was invaded and by 650 A.D. conquered: in 644 A.D. India was invaded: in 669 A.D. Constantinople beseiged (though it did not fall until much later and then at the hand of the Ottoman Turks). In Africa, Egypt fell in 642 A.D., Carthage had fallen by 697 A.D. and by 712 A.D. Spain too had been subdued. Westward expansion was halted by the defeat of the Saracens at the battle of Tours in 732 A.D., just 100 years after the death of Mohammed. Important amongst the factors that facilitated these conquests were the weakness through long wars of those whom they defeated, the tolerance of the Mahommedans towards all sects and religions, and the uniting of the Mahommedans and Berbers in North Africa. Far from being a planned campaign to conquer the world, the first assaults of the Arabs were plunder raids which, owing to the unexpected weakness of the foe, were substantiated and then increased. The Arabs took their Empire with little fighting and took it in functioning order from people who were glad to serve under their new and tolerant masters. In many cases in order to avoid taxation the people they had overrun accepted the Faith of Islam and this both united the Empire and because it was forbidden to translate the Koran, gave it a common language.

The Mohammedans were not a very religious people, and although we must remember the Prophet's edict to go forth and conquer the world for the true faith, it would be wrong to overlook the fact that many of their conquests were the result of the search for plunder and wealth and not for converts. I have already said that the conquered were

often willing to accept the religion of their new masters just as they were willing to pay taxes in order to make their lives easier. But whatever caused the conquered to turn their faces towards Mecca, the fact remains that with a universal Faith and a universal language the Mohammedan world was in a position to exchange knowledge. It is fortunate that the Mohammedan conquests were made with so little fighting, for had there been true fighting many of the libraries and centres of learning would have been destroyed and the Arabs would never have been able to acquire and concentrate the knowledge of the ancient world. We can thank their lack of fanaticism for much of the knowledge of the Ancients that we possess today. The Umayyad Caliphs who were the immediate successors of the Prophet and the four orthodox Caliphs and who reigned in the period 632-750 A.D. were even less fanatical than their successors the Abbassid Caliph whose greater religion and imagination was largely a product of Persian influence. When the change of Caliphate came it was marked by the removal of the capital of Araby from Damascus to Baghdad. Only one member of the old Umayyad dynasty escaped and he came to rule the Spanish Arabs and from that time on Spain became independent of the rest of the Arab world.

The Caliphate attained its greatest splendour under the early Abbasids, one of these Harum al Rashid, must be known to you all through Eastern romantic literature, "A Thousand and One Nights", "Hassan", and the like. Here then let me take up the tale of medicine in the courts of the Caliph, Harum-al Rashíd as he is carried at the head of an endless retinue accompanied by his musicians, his dancing girls, his executioner —ready at a nod to do his master's bidding— and somewhere amidst that brilliant galaxy of persons and in that court whose luxury and poetry has capitvated the minds of our sober Western world, walks his physician.

The Abbasid Caliphate rose and fell in its splendour and finally ended in 1258 A.D. when the last Caliph along with 800,000 inhabitants of Baghdad was put to death by the Mongols. But the story never gets as far in time as that, for long before that date one known to us as Constantinus of Africa was furiously translating medical books back from Arabic to Latin, and returning the torch of learning to the Western world.

There was a medical school at Jundí-Shapúr in Persia which at the time of the birth of Mahomet was at the height of its glory. This centre of learning had been founded in the third century and Greek settlers had probably been there since its foundation. It had risen to fame in the fifth century largely through the intolerance of the Byzantine people who drove the Nestorians from Edessa and many of them had settled at Jundí-Shapúr. In the sixth century it is recorded that the Lord of the Persians sent his physician to India and that he returned with Indian medical books, Indian physicians, and the game of chess. This Indian influence was absorbed into the teaching of Jundí-Shapúr and later passed to the Arab world. And so it was that in Jundí-Shápúr medicine of the Middle East, Far East, and of the Mediterranean lands converged. In a consideration of the source of Arabian medicine too much stress must not be laid upon the conquests of the Mohammedans, and due significance must be allowed to the peaceful flow of knowledge from neighbouring countries. It is fair to suppose that a good deal of medical knowledge had passed from Persia to Arabia even before the Mohammedans had overrun Jundí-Shapúr. Already in 600 A.D. there were Syriac manuscripts of Galen and Hypocrites, and many of these were translated into Persian. These Syriac and Persian translations were probably the source of many of the Arabic translations that were to appear in the eighth and ninth centuries.

The medical teaching of Jundí-Shapúr was in the main Greek, but it was overlaid with Persian influence. Persia had twice reached the peak of contemporary civilisation; 500-300 B.C. and 200-640 A.D., and twice that civilisation had been overrun as a result of foreign invasion—Greek and then Arab. Learning and literature alike were destroyed and little true assessment of their value can be made but it must be assumed that the school of Jundí-Shapúr was one of the main influences upon the medical knowledge that we now know as Arabian medicine.

There were, it appears, three classes of healers. Those by prayers, those by diet and drugs, and those by instruments: the priest, the physician and the surgeon. Of the latter it is recorded that they had to operate successfully on three unbelievers before being allowed to attempt the cure of one of

the good religion—a very practical studentship! This system is rather reminiscent of the scale of values named in the Hammurabi Code of Babylon (2000 B.C.), the oldest code of laws in the world. "If a doctor has treated the severe wound of a slave with a bronce lancet and has caused his death he shall render slave for slave."

"If he has opened his abcess with a bronze lancet and has made him lose his eye he shall pay money—half his price."

"If a doctor has treated a gentlemen for a severe wound with a bronze lancet and has cured the man, or has opened an abcess of the eye for a gentleman with a bronze lancet and has cured the gentleman, he shall take ten shekels of silver."

"If he has caused the gentleman to die or caused the loss of the eye of the gentleman, one shall cut off his hands."

An unenviable system of 'lex talionis', an eye for an eye, a tooth for a tooth—safer to have a form for a death.

It is difficult to say how the school of Jundí-Shapúr was affected by the Arab invasion of the seventh century. Its influence only began to be felt in Arabia towards the end of the eighth century when Baghdad became the centre of the Arabic world.

In 765 A.D. the second Abassid Caliph—al-Mansúr — summoned from Jundí-Shapúr Júrjís, the chief physician of the hospital there. He stayed four years with the Caliph (an honour that we must consider as a measure of his skill) and at the end of that time was allowed to return home, taking with him 10,000 dínars and having politely refused the Caliph's suggestion that he should embrace the Islamic Faith. I feel that this tale gives an idea of the esteem with which the school and hospital of Jundí-Shapúr were regarded and perhaps also of the comparatively important position occupied by doctors in the courts of the Caliphs. They could have been no mere slaves for 10,000 dinars was a vast sum of money and to turn down the Caliph's offer of the Faith of Islam with the words "I prefer to be with my fathers, whether in Heaven or Hell" might have cost him a limb or two if he had been less respected or less useful.

A Medical Consultation from an Arabic miniature in the State Library, Vienna.

The family of Bakht-Yishú (of which Júrgís was one) remained as eminent phyisicians for 250 years, always being highly honoured by the rulers and nobles of their times. This picture of hereditary medicine is substantiated by al-Qíffí when he says "that they only were worthy of this

science, and would not suffer it to go forth from themselves, their children and their kin." There was about the school of Jundí-Shapúr an unwillingness to impart their knowledge to others. This might have done something to prevent complete exchange of ideas with their neighbouring countries before the Arab conquests, but once they had been overrun they could no longer keep the secrets of their trade.

Medicine in the time of the Caliphs was not always easy, for the passing fancy of an Eastern ruler had a way of causing effects that were all too final. Here is a tale that did not end quite so finally as it might have done. There was once a physician of Jundí-Shapúr named Hunayn (known to mediaeval Europe as Johannitus) who had gained favour with the Caliph but his new master sought to test his professional honour and bade him make a poison to dispatch one of his enemies. Rich reward if he did, imprisonment or death if he refused. He refused, and was imprisoned. After a year he was once again given the chance to concoct the potion. Rich reward or "a short, sharp shock with a cheap and chippy chopper on a big black block". Hunayn's answer fell well within the Hippocratic code. "I have already told the Commander of the Faithful that I have skill only in what is beneficial and have studied nought else", and, as a final pass, he added, "I have a Lord who will give me my right tomorrow in the supreme uprising, so if the Caliph would injure his own soul, let him do so." But, like all good Eastern fairy stories, this one has a good end, for the Caliph smiled, and said that he had only wanted to test Hunyan's uprightness before confiding in him his innermost secrets. Such playful tests must have made a Caliph a trying patient.

The tale of Hunyan is told not merely by way of interlude but because he was an important character in the history of Islamic medicine. He was both the most celebrated and most productive of the great translators. He translated seven of the ten works of Hippocrates that were available to him and most of the works of Galen. Arabic, Syriac and Greek were languages known to him and he translated into both Greek and Syriac. Few of these early translations have survived which makes it difficult to assess their accuracy.

Hunyan and his disciples were by no means the only translators, but it is not intended to give a detailed list of all these scholars who, by the close of the ninth century, had given the Moslem world translations of most of the great works of Greece and Rome: works of philosophy, astronomy, chemistry, mathematics and medicine. It was to an Empire with one language that these books came; and to an Empire and people ready to receive them. The demand for copies of these translations was great, for the rich of every town were competing to build libraries and learn.

To write upon medical matters it was both necessary and natural that the Arabs should develop an anatomical vocabulary, that was almost entirely new to their language. New things are pleasant to play with, but I find it surprising that a people so nervous and poetic in their language should have found a common use for these new terms in their poetry. New and strange words and particularly those of science never seemed to fit easily into poetry. When we find them in our own language as we do, not uncommonly nowadays, they usually appear ugly and are only suited to that vicious brand of poetry that is the particular product of our age—a poetry designed to shock us into recognition of the soulless metal age.

But for a people whose poetry was essentially romantic, it comes as a surprise to find that the Umayyad Caliph Yazíd who died for the love of the slave girl Habbába was deeply stirred by hearing her sing—

> "Between the clavicles and the uvula is a burning heat
> Which cannot be appeased or swallowed down and cooled".

Not only the words of the new science, but an understanding of medicine seems to have been a common accomplishment of the educated. And even of the less educated, if we are to believe the tale of Tawaddud the slave girl in the Arabian Nights. You may remember how this beautiful girl was offered to Haroun al Rashid for 10,000 dinars (that magical sum), and how the Caliph agrees to pay this sum provided she can answer questions put to her by his most learned professors of theology, law, astronomy, philosophy, rhetoric, chess and medicine. This she does and surpasses expectation at the end of her gruelling viva by asking her examiners a question which they cannot answer. For us the interest in the story must

lie not in her success and subsequent happiness but in the medical questions and answers. These might be said to give us some idea of the status of medical knowledge at that time. Facts that emerge from it are the fairly advanced state of knowledge of Osteology and the primitive account of the blood vascular system. Of the branches of the aorta Tawaddud says, "None knoweth the tale save He who created them." This is, of course, a distribution of knowledge that might well be expected. Dissection had not been allowed by Roman law and the Mahommedan religion forbade it. Galen had to go to Alexandria to learn Osteology, for there he had been told, were human bones. Other less durable parts were unobtainable, and a great deal of the current anatomical knowledge had been gleaned from the dissection of beasts. There is evidence that apes were dissected in lieu of human corpses. In 836 A.D. by order of the Caliph, apes of a type supposed to resemble humans were provided by the ruler of Nubia for dissection by Yuhanná. If his knife was as sharp as his tongue his work should have been good. It is told in the Fihrist (or Index of Arabian sciences, published in 987 A.D.) he once rebuked a courtier who had annoyed him, with these words: "If the ignorance wherewith thou art afflicted were converted into understanding and then divided amongst 100 beetles, each of them would be more sagacious than Aristotle." It is not my intention to dwell on the vexed subject of human dissection, but suffice it to say that an occasional hurried and furtive dissection of criminal corpses may have added something to their small store of existing anatomical knowledge.

The era of translation and acquisition of existent medical knowledge from the other civilisations filled that period of time that came between the Arabic conquests of 632-732 A.D. and the era of original Arabic discovery which began in the ninth century. It is in this latter period that the great names of Islamic medicine are to be found; those of Rhazes and Avicenna being the best known and appearing even in the briefest synopsis of medical history. Theirs are the key names to the new era.

Rhazes was one of the greatest physicians that ever lived. He was born in Raj (Ray) in North Eastern Persia in the middle of the ninth century, and died in Baghdad in 932 A.D. In the early days he studied physics, alchemy and music, and was a most accomplished lute player. He was a friend of the aged dean of pharmacists at his local hospital, one Adudu'd-Dawla and was for ever questioning him on matters of medicine. His interest in medicine became so fierce that at the age of 40 he began his medical studies under Ali-ibn-Rabban (the author of "The Paradise of Wisdom"). He read the Greek, Roman and Hindu authors and rapidly became a successful physician. He took the post of chief physician to the hospital in his own town, and there himself taught students. In the 'Fihrist', the author writes, "I remember a man of Ra telling me that Rhazes was a serious old man with a large drooping head who seated his pupils in rows according to their grades and attainments. First, he would call upon the lowest class to examine a patient, and if they failed to diagnose the ailment, the next, and then the next would be tested, and only after the malady had eluded the knowledge of all his disciples did it come to the master's attention."

Later in life he was called to be chief physician of the new hospital in Baghdad. It is said that Rhazes was chosen for this post out of 50 applicants, and if this is true it throws light on the flourishing state of medicine. There is a well-known story of how when Rhazes was asked to chose a site for the hospital, he hung pieces of raw flesh about the town and chose the place where the meat resisted putrefaction longest.

There is the hospital at Baghdad—the finest perhaps in the world at that time—he practised, taught, and wrote. He was a prolific writer, and his works, by no means all of which were medical, number about two hundred.

Kitábul-Mansúrí (the 'liber Almansoris' or the 'Almansor' of the Latin world), the first important book from his pen was dedicated to Al-Mansur, the ruler of his native province Khorassan; it was an encyclopaedic medical work in ten volumes largely drawn from the works of Galen, Hippocrates, Oribasius, Aetius, Paulus Aegineta, and devoid of much original work. It is interesting because its systematised encyclopaedic method of presentation was a forerunner to the method used by Avicenna in his great 'Canon', and because Rhazes' own magnum opus has often been criticised on the ground that he, Rhazes, could not be scientific in classification as was Avicenna. The ninth book on the treatment of diseases was particularly popular in the

middle ages and was widely used as a text-book.

"It was during an evening in the house of a virtuous man", writes Rhazes in the preface to his treatise on Small-pox and Measles, "who happened to be a prominent patron of the dissemination of useful science, that Small-pox was mentioned. I discoursed on the subject as far as my recollection permitted me that evening. My good friend, may Allah prolong his life, entreated me to compile an exhaustive and elaborate treatise on Small-pox, for he failed to find anything written on the subject until that time—either modern or ancient. So I have written this treatise in the hope of gaining the favour and the reward of the Almighty". The book contains excellent clinical descriptions, and there breathes in it a vigorous spirit of observation. It was one of the first treatises on a particular disease, and because of it Rhazes' reputation has become enhanced. Although today we might differentiate more accurately between the two diseases we could add little to Rhazes' description of the clinical picture.

Great as have been the claims for the originality of this book, Rhazes himself showed great humility and honesty in giving the credit to Galen. "Any physician," he says, "who claims that the good Galen did not mention Small-pox is mistaken. Such a person has either not read Galen's works at all, or if he has read them, his reading was very careless." But then Rhazes was a man of great honesty and humility as a quotation from 'Upon the circumstances which turns the heart of Most Men from Reputable Physicians', may show.

"Among those factors which make intelligent men turn away from the physician and place their trust in imposters, is the delusion that the physician knows everything and requires to ask no questions. If he inspect the urine or feel the pulse, he is supposed to know what the patient has eaten and what he has been doing. This is lying and deception and is only brought about by trickery, to artful questions and speech, through which the senses of the public are deceived. Many hire men and women to find out all the circumstances of the patient and report what is told them by servants, friends, and neighbours. I myself, when I began to practise medicine, resolved to ask no questions, later when it was seen that I made circumstantial enquiries, my reputation sank. When the patient sees that the physician is in doubt concerning his cure" (he is speaking here of a minor ailment) "he draws it as a certain inference that the physician will understand still less of a severer or more extensive illness. This is a false analogy. The symptoms of such diseases are less obvious because they are slighter deviations from the normal, and their cure is more difficult because no drastic remedies can be applied. An official once complained of a difficulty in moving some of his finger-joints on account of a hard, but very small sore that had for some time resisted the remedies he had applied. He openly reviled the physicians, saying, 'If your art does not suffice to cure the small sore on the fingers, how can you treat broken ribs and arms?' He then sought treatment from women and from the vulgar."

The work upon which Rhazes' fame is chiefly based is the "Continens" or "Al-Hawi". It was a huge compilation of fact running into 20 or 30 volumes. Its great merit lay in its originality and in its comparative freedom from Greek and Roman influence. Its style was difficult, and it lacked system and clarity, but this, it is generally thought, was due to the fact that it was compiled after his death by his students. Here are contained all his clinical notes, and here is the evidence of the wise and human mind that earned for him the title of the "Greatest clinician of the world of Islam". One example suffices to show how Rhazes laid emphasis on case history, on symptoms and signs, and how he made differential diagnosis and avoided theoretical speculation.

"Abdu'llah ibn Sawada used to suffer from attacks of mixed fever, sometimes quotidian, sometimes tertian, sometimes quartan, and sometimes recurring once in six days. These attacks were preceded by a slight rigor, and micturition was very frequent. I gave it as my opinion that either these excesses of fever would turn into quartan, or that there was ulceration of the kidneys. Only a short while elapsed ere the patient passed pus in the urine. I thereupon informed him that these feverish attacks would not recur, and so it was.

The only thing which prevented me at first from giving it as my definite opinion that the patient was suffering from ulceration of the kidneys was that he had previously suffered from tertian and other mixed types of fever,

and this to some extent confirmed my suspicion that this mixed fever might be from inflammatory processes which would tend to become quartan when they waxed stronger.

Moreover the patient did not complain to me that his loins felt light a weight depending from him when he stood up; and I neglected to ask him about this. The frequent micturition also should have strengthened my suspicion of ulceration of the kidneys, but I did know that his father suffered from weakness of the bladder and was subject to this complaint, and it used likewise to come upon him (that is the patient) when he was healthy, and it ought not to be the case henceforth, till the end of his life, if God will.

So when he passed the pus I administered to him diuretics until the urine became free from pus, after which I treated him with terra sigillata, Boswellia thurifera, and dragon's blood, and his sickness departed from him, and he was quickly and completely cured in about two months. That the ulceration was slight was indicated to me by the fact that he did not complain to me at first of weight in the loins. After he passed pus, however, I enquired of him whether he had experienced this symptom and he replied in the affirmative. Had the ulceration been extensive, he would of his own accord have complained of this symptom. And that the pus was evacuated quickly indicated a limited ulceration. The other physicians whom he consulted besides myself, however, did not understand the case at all, even after the patient had passed pus in his urine."

A whole paper could be written upon Rhazes, upon his scholasticism, industry, observation, humanity and insight, all of which carried him above his contemporaries, whose medicine at the best was inspired by the Ancients, and at the worst—well, for that, let Rhazes himself speak.

"There are so many little arts used by Moutebanks and Pretenders to Physick, that an entire treatise, had I a mind to write one, would not contain them: but their impudence, and daring boldness is equal to the guilt and inward conviction they have of tormenting and putting persons to pain in their last hours, for no reason at all. Now some of them profess to cure the Falling-Sickness, and thereupon make an issue in the hinder part of the head, in form of a cross, and pretend to take something out of the opening, which they held all the while in their hands. Others give out, that they can draw snakes or lizards out of their patients noses, which they seem to perform by putting up a pointed iron probe, with which they wound the nostrils, 'till the blood comes: then they draw out the little artificial animals composed of liver, etc. Some are confident, they can take out the white specks in the eye. Before they apply the instrument to that part, they put a piece of fine rag into the eye, and taking it out with the instrument, pretend it is drawn immediately from the eye. Some again undertake to suck water out of the ear which they fill with a tube from their mouth, and hold the other end to the ear, and so spurting the water out of their mouths and pretend it came from the ear. Others pretend to get out worms, which grow in the ear, or roots of the teeth. Others can extract frogs from the under-part of the tongue; and by lancing make an incision into which they clap in the frog, and so take it out. What shall I say of bones inserted into wounds and ulcers, which, after remaining there for some time, they take out again? Some when they have taken out a stone from the bladder, persuade their patients, that still there's another left; they do this for this reason, to have it believed, that they have taken out another. Sometimes they probe the bladder, being altogether ignorant and uncertain, whether there be a stone or no. But if they don't find it, they pretend at least to take out one they have in readiness before, and show that to them. Sometimes they make an incision in the anus for the piles, and by repeating the operation often bring it to a fistula, or an ulcer, when there was neither before. Many things of that nature do they get out, which these imposters with great dexterity have put in; tending many times to the endangering of the health of their patients, and often ending in the death of them. Such counterfeits could not pass with discerning men, but that they did not dream of any fallacies, and made no doubt of the skill of those whom they employed: till at last when they suspect, or rather look more narrowly into their operations, the cheat is discovered. Therefore no wise men ought to trust their lives in their hands, nor take any more of their medicines, which have proved so fatal to many."

In old age Rhazes went blind and refused operation saying "No, for I have seen so much of the world, that I am weary of it".

Abn Ali Husan ibn Abdullah ibn Sina, known to Western Europe and to all of you as Avicenna was the most celebrated Islamic physician of the 11th century, and an intellectual prodigy. Born in 980 and brought up in places that we think exist only in poetry, he led his life like the leading character in a fantasy by Flecker, and when work, worry, wine and women had sapped every ounce of energy in his body he died in the year 1037. "Perhaps never before or since has there been so precocious, so facile and so wide an intelligence united with such extended and indefatigable energy."

At the age of 10 he knew the Koran by heart, before the years of puberty were passed he had acquired a miraculous knowledge of the ancient authors and had studied philosophy, logic, law and mathematics. When he was 16 he took up the study of medicine. In two years he was a famous physician; had treated royalty and had been given the freedom of a prince's library. To celebrate his coming of age he published a 20-volume encyclopaedia.

When he was 24 he went to Khiva—"Lone Khiva in the waste"—but had to leave there to escape from being kidnapped by the Sultan Mohmúd of Ghazna. He wandered in search of a post to Jurján where Qúbús reigned—for he had heard of his patronage of learning. But at Jurján the murder of that Prince coincided with his arrival and he had to move on. He moved to the Court of Amir Shamsúd-Dawla of Hamadán, cured him of the colic and was created Chief of Vizier. A strong military uprising caused his deposition and he found himself in gaol—once again the Amir suffered colic, once again he was Vizier. And so that sparkling stone rolled about the courts of Araby, gathering experience and fame.

"At home of nights by lamplight I read and I wrote, and when I grew so sleepy that

A Medical Consultation. Miniature taken from a MS. of Rhazes "Contineus" in the Bibliothèque Nationale.

I felt my powers of work were failing me, I drank a glass of wine to restore my energy and resumed my labours. When at last I fell asleep I was still so full of my studies that often on waking I found problems which had perplexed me had been resolved during slumber." And all the time he was studying and writing by night he was obsessed with the cares of State and lecturing by day and satisfying his less refined senses at any or all times. "All his philosophy could not make him moral, nor all his physic teach him to preserve his health."

Later in life he settled at Ispahan and then at Teheran, there devoting himself to science. By the age of 58 his body could stand the pace no longer and since his physic could not save his body, nor his metaphysic his soul, they departed.

The writings of Avicenna were numerous and invaded all branches of learning. Authorities are at variance as to the actual number of his works, but 50 would be a conservative estimate, and several of these were in many volumes. Many were on theology and metaphysics, a large number on medicine, many more on astronomy and natural philosophy, and yet others in verse. Indeed, half his medical books were in verse, but these must count as the least significant in that branch of his learning. His poetry must not be underestimated, however, for it was, and still is, highly esteemed in the East. Omar Khayam must (according to some authorities) surrender at least one verse to Avicenna.

"Up from Earth's Centre through the
Seventh Gate
I rose, and on the Throne of Saturn sate,
And many a knot unravelled by the Road,
But not the Master-Knot of Human Fate."

One book only demands attention, that is the great Canon or Qánún of which it might be said, it was the medical guide book of Europe from the 12th to the 17th century. It was the longest and most famous book that ever came out of Araby. A product of a clear and systematising mind that divided and sub-divided the book until the whole of medical knowledge fell within a composite plan. A book of drugs arranged alphabetically, a book of diseases of particular organs arranged from the head to the feet and so on. It was this simplification together with Avicenna's great fame in all the fields of learning that created the immense popularity which the book enjoyed: of almost oracular nature and beyond question correct.

Nizámí-í-Arúdí of Samarkand wrote—"All this together with much more is to be found in the Qánún, and from him who hath mastered the first volume thereof, nothing will be hidden concerning the general theory and principles of medicine, so that could Hippocrates and Galen return to life it would be proper that they should do reverence to this work."

In the Qánún there is not the understanding and physicianly approach of Rhazes, but the clear dissected system of medicine. In contrast to a quotation from the Al-Hawi of Rhazes, here is one from Avicenna. Up to the time of the Islamic physicians, meningitis had been confused with acute affections accompanied by delirium. Avicenna defines it as follows:

"Acute sersâm is an inflammation or tumour of the envelopes of the brain. The prodromata of this disease consist of headache, disturbed sleep and mental depression without cause. As soon as the process becomes localised in the meninges, the first symptoms developing are restlessness, violent headache and pain in the neck. Occasionally there is Epistaxis and slight incontinence of urine. When the disease has fully developed all hope of cure is vain. There is intense fever and mental depression, and the patient remains perfectly silent and indifferent to what is said to him. Respiration is rapid and irregular; the thoracic movements are, however, ample and deep; localised or generalised convulsions occur; sleep is disturbed and accompanied by extreme restlessness and halucinations, the patient cries out and is unable to bear light. At the terminal phase of the disease, the tongue becomes paralysed and insensibility is general; if the patient be touched with an instrument, even with considerable pressure, he feels nothing; finally the limbs become cold and the patient dies from asphyxia."

It would not be fair to infer from these quotations that all of Avicenna's work was as one and all of Rhazes' as the other, but in an unfair way they draw out the difference between these two great Islamic physicians. Rhazes was an imaginative man, Avicenna a logical thinker: Rhazes a clinician, Avicenna a systematist who saw in the individual patient what was true to type and like Galen he was always aiming to produce a water-tight system that might free the mind from doubt and exclude the hopeless groping

in the dark. In the hand of Avicenna medicine became a huge, unified, circumscribed, logical edifice embracing the whole of Greek and Arabian knowledge. Perhaps the whole difference is best summed up by saying "Rhazes was a better physician than philosopher, Avicenna a better philosopher than physician".

Avicenna and Rhazes are the supreme examples of the masters of Islamic medicine. There were many others whose names were great, and who were famous in their times. Time and space is less kind now than fame and honour was then, and a list of the great names that might otherwise escape notice must suffice. Alí ibn Rabbam was one of the earliest independent Arabic medical thinkers and wrote a well-known book "Paradise of Wisdom": he also needs mention as a teacher of Rhazes. Alí ibnu'l Abbás (Hali Abbas), wrote the Malikí, or as it was known in Europe the (liber Regius), and this book enjoyed great popularity until Avicenna's Qánún usurped its position. There was Abul Hasan, and Ahmed ibn Abi'l-Ash'ath who wrote one of the earliest known manuscripts of Arabian medicine. There was ibn Buttan, author of several books and Dean of the Hospital at Antioch. And in Spain that other outpost of Moslem learning, that has somehow escaped mention there was Abul Kasin Az Zahrawi well known in Europe as Albucasis, who lived in the 10th century and was perhaps the greatest of all the Arabian surgeons. And there was, too, Ibn Zuhr, better known as Avenzoar, author of At-Taisir and the greatest clinician from the Western Provinces of Islam. He was, to the West, what Rhazes was to the East. Ibn Tufail, statesman, philosopher, poet, physician and chancellor in the Court of the Caliph Yusuf and ibn Rashid (Averroës) were other names that were famous in the realms of Arabic medicine.

The practice of medicine in the time of the great Abbassid Caliphs needs attention and a random selection of cases, stories and anecdotes substantiates what has been written of places and persons.

Firstly a word about examination. This habit was not acquired until the year A.D. 931 when the Caliph enforced an order that none should practise medicine in Bagdad, unless he was able to satisfy Sinán ibn Thábit of Harrán of his competence and efficiency. That the examination was not always of a very searching character is shown by the following incident. "Amongst the practitioners who presented themselves before Sinán was a dignified and well-dressed old man of imposing appearance. Sinán accordingly treated him with consideration and respect, and addressed to him various remarks on the cases before him. When the other candidates had been dismissed, he said, 'I should like to hear from the Shaykh something which I may remember from him, and that he should mention who was his Teacher in the Profession.' Thereupon the old gentleman laid a packet of money before Sinán and said, 'I cannot read or write well, nor have I read anything systematically, but I have a family whom I maintain by my professional labours, which, therefore, I beg you not to interrupt.' Sinán laughed and replied, 'On condition that you do not treat any patient with what you know nothing about, and that you do not prescribe phlebotomy or any purgative drug save for simple ailments.' 'This', said the old man, 'has been my practice all my life, nor have I ever ventured beyond oxymel and jalap'. Next day a well-dressed young man of pleasing and intelligent appearance presented himself. 'With whom did you study?' enquired Sinán. 'With my father,' answered the youth. 'And who is your father?' asked Sinán. 'The old gentleman who was with you yesterday,' replied the other. 'A fine old gentleman!' exclaimed Sinán; 'and do you follow his methods? . . . Yes? . . . Then see to it that you do not go beyond them!' "

And now a word from Hali Abbas the author of the Malikí. It concerns the importance of regular attendance at the hospitals and throws some light on their methods of teaching.

"And of those things which are incumbent on the student of this Art are that he should constantly attend the hospitals and sick-houses; pay unremitting attention to the conditions and circumstances of their inmates, in company with the most acute professors of Medicine; and enquire frequently as to the state of the patients and the symptoms apparent in them, bearing in mind what he has read about these variations, and what they indicate of good or evil. If he does this, he will reach a high degree in this Art. Therefore it behoves him who desires to be an accomplished physician to follow closely these injunctions, to form his character in accordance with what we have mentioned therein, and not to neglect them. If he does

this, his treatment of the sick will be successful; people will have confidence in him and be favourably disposed towards him; he will win their affection and respect and a good reputation; nor withal will he lack profit and advantage from them. And God Most High knoweth best."

It would not be right to give no indication of the scale of fees charged by these physicians. Like most things, in the East, they seem to have been somewhat exorbitant and slighty unbelievable. Al-Qífí speaks of an eminent physician Yichú "Who received out of public funds a monthly salary of 10,000 dirhams, and from the Privy Purse 50,000 dirhams at the beginning of each year, besides clothes to the value of 10,000 dirhams. For bleeding the Caliph Hárúnu'r-Rashíd twice a year he was paid 100,000 dirhams, and an equal sum for administering a biennial purgative draught. From the nobles of the Court he received in cash and kind 400,000 dirhams a year, and from the great Barmecide family 1,400,000 dirhams. According to al-Qífí's computation, the total amount which he received in these ways, apart from what he earned privately from lesser patients, during his 23 years' service of Hárúnu'r-Rashíd and his 13 years' service of the Barmecides, amounted to 88,800,000 dirhams, a sum equivalent to more than three and a half million pounds."

There was, then, in Araby a great interest in matters medical in all classes of the people, and amongst Arabic literature there are to be found collections of quaint anecdotes called Nawádir. Amongst these tales are many whose reference is directly to medicine and the men who practised it. For the truth of these tales no one can vouch, but they are at least in part historical and give some account of medical practice as seen from the other side of the fence. There is only time to recount a very few. Many of them were grotesque stories of parasytic invasion and of the therapeutic value of vipers and locusts such as the story supposedly related by Rhazes. It is told by a man named Abu Ali Umar ibn Yahya al'Alawi, and concerns a fellow pilgrim of his from Kúfa, who suffered from dropsy and was kidnapped, along with his camel, by Arab marauders. "One day his captors entered the hut where he was lying, bringing some snakes which they had caught, and which they proceeded to roast and eat after they had cut off their heads and tails. He, hoping that this unaccustomed food would poison him, craved a portion and ate it, when, after falling into a deep sleep and waking in a copious perspiration found that he was quit of his dropsy."

And another story along the same lines is that "of a boy who suffered from violent pains and throbbing in the stomach, for which no cause or cure could be found, although he was examined by many physicians. Finally he was sent home, and there a passing physician cross-examined him at length, and discovered that his ailment dated from a day when he had eaten pomegranates stored in a cowhouse. The physician next day brought him broth, made with the flesh of a fat puppy, and bade him take as much of it as he could, while refusing to make known its nature. Then he gave him to eat a quantity of melon, and two hours later beer mixed with hot water, after which he informed him how the broth had been prepared. Thereupon the patient was violently sick, and in his vomit the physician presently discovered "a black thing like a large date stone which moved", and which proved to be a sheep or cattle tic which had entered the pomegranate, been accidentally swallowed by the boy and attached itself to the coats of his stomach, from which it was induced to detach himself by being presented with a more attractive substance."

There are other stories, demonstrating elementary methods of psycho-therapeutics and some of these have become so well known in Arabic literature as to have found their way into poetry and tales of romance. In one anger is employed in the treatment of rheumatism.

"The great physician Rhazes was summoned to Transoxiana to attend the Amir Mansúr, who was suffering from a rheumatic affection of the joints which baffled all his medical attendants. On arriving at the Oxus, Rhazes was so much alarmed at the small and fragile appearance of the boat in which he was invited to embark that he declined to proceed further, until the King's messengers bound him hand and foot, threw him into the boat, and carried him across by force, though otherwise they treated him with the utmost respect and even apologised for the use of violence, begging him to bear them no grudge. Rhazes assured them that he harboured no resentment and explained the motive of his resistance. "I know," said he, "that every year many thousands of persons

cross the Oxus safely, but, had I chanced to be drowned, people would have said, 'What a fool he was to expose himself to this risk of his own free will'. But, being carried across by force, had I then perished people would have pitied, not blamed me."

On reaching Bukhárá he tried various methods of treatment on the Amir without success. Finally he said to him, "Tomorrow I shall try a new treatment, but it will cost you the best horse and best mule in your stables." The Amír agreed and placed the animals at his disposal. Next day Rhazes brought the Amír to a hot bath outside the city, tied up the horse and the mule, saddled and bridled, outside, and entered the hot room of the bath alone with his patient, to whom he administered douches of hot water and a draught which he had prepared "till such time" says the narrator, "as the rumours in his joints were matured. Then he went out, put on his clothes, and, taking a knife in his hand, came in, and stood for a while reviling the Amír, saying, "Thou didst order me to be bound and cast into the boat, and didst conspire against my life. If I do not destroy thee as a punishment for this, my name is not Muhammad ibn Zakariyyá." The Amír was furious, and partly from anger, partly from fear, sprang to his feet." Rhazes at once fled from the bath to where his servant was awaiting him outside with the horse and the mule, rode off at full gallop, and did not pause in his flight until he had crossed the Oxus and reached Merv, whence he wrote to the Amír as follows:

'May the life of the King be prolonged in health and authority. Agreeably to my undertaking I treated you to the best of my ability. There was, however, a deficiency in the natural caloric, and this treatment would have been unduly protracted, so I abandoned it in favour of psychotherapeutics, and, when the peccant humours had undergone sufficient coction in the bath, I deliberately provoked you in order to increase the natural caloric, which thus gained sufficient strength to dissolve the already softened humours. But henceforth it is inexpedient that we should meet.'

The Amír, having recovered from his anger, was delighted to find himself restored to health and freedom of movement, and caused search to be made everywhere for the physician, but in vain, until on the seventh day his servant returned with the horse and mule and the letter cited above. As Rhazes persisted in his resolution not to return, the Amír rewarded him with a robe of honour, a cloak, a turban, arms, a male and female slave, and a horse fully caparisoned, and further assigned to him a yearly pension of 2,000 gold dínárs and 200 ass loads of corn."

In the Qánún Avicenna classifies Love as a mental disease, and says that a state of the pulse can often lead the physician to an understanding of this ailment. The great mystical poet Jalálu'd-Dín Rúmí (The Dante of Persia) tells us a tale on this theme.

"A King, while out hunting, saw a very beautiful girl, fell in love with her, and married her. To his great distress she forthwith sickened, nor could the physicians summoned to her bedside alleviate her malady or assuage her suffering, because, when assuring the king that they could cure her, they omitted the saving clause (istithná) 'Please God.' Hence all their drugs produced the opposite effects to those intended and desired; oxymel only increased her biliousness, and myrobolans desiccated instead of relaxing. Finally, in answer to the King's prayers, a 'divine physician' appears, and, after a careful examination of the patient, announces that the treatment hitherto pursued has been wholly mischievous and based on a wrong diagnosis. He then asks to be left alone with the patient and proceeds to question her about the towns where she has previously lived, since, he explains, treatment varies according to place of origin or sojourn. While talking to her about her past history he keeps his finger on her pulse, but observes no sign of emotion until Samarquand is mentioned, and again later at the name of the Sar-i-pul or "Bridge-end" quarter and the street called Ghátafar. In short he finally discovers, in precisely the way indicated by Avicenna, that she is in love with a certain goldsmith living in that quarter of Samarquand. Thereupon, having reassured her and promised her recovery, he instructs the King to send messengers to Samarquand to invite the goldsmith to his court and offer him handsome remuneration. The unsuspecting goldsmith comes blithely, flattered by the King's gracious words, fine gifts and fair promises, and on his arrival, by the 'divine physician's' instructions, is married to the girl, who in the course of six months recovers her health and good looks. Then the physician begins to administer to the goldsmith a slow poison which causes him to become 'ugly, displeasing and sallow',

so that the girl wearies of him before his death, which is not long delayed, places her once more at the disposal of the king, whose bride she now becomes." The allegorical meaning of the outwardly immoral story is obscure.

One last anecdote, once again told of Avicenna. This time a cure for melancholia

"A certain prince of the House of Buwayh was afflicted with melancholia and suffered from the delusion that he was a cow. 'Every day', says the author, 'he would low like a cow, causing annoyance to everyone, and crying, "Kill me, so that a good stew may be prepared from my flesh"; until matters reached such a pass that he would eat nothing, while the physicians were unable to do him any good.' Finally, Avicenna, who was at this time acting as Prime Minister to Dawla ibn Kákúya, was persuaded to take the case in hand, which in spite of the pressure of public and private business, political, scientific and literary, with which he was overwhelmed, he consented to do. First of all he sent a message to the patient bidding him be of good cheer because the butcher was coming to slaughter him, whereat, we are told, the sick man rejoiced. Some time afterwards, Avicenna, holding a knife in his hand, entered the sick-room, saying, 'Where is this cow, that I may kill it?' The patient lowed like a cow to indicate where he was. By Avicenna's orders he was laid on the ground bound hand and foot. Avicenna then felt him all over and said, 'He is too lean, and not ready to be killed; he must be fattened.' Then they offered him suitable food, of which he now partook eagerly, and gradually he gained strength, got rid of his delusion, and was completely cured." The narrator concludes, "All wise men will perceive that one cannot heal by such methods of treatment save by virtue of pre-eminent intelligence, perfect science, and unerring acumen."

Amongst all these tales are many wise aphorisms. The words of one in particular by an unknown physician strike a chord that rings with a perpetual truth. "Know that I and thou and the disease are three factors mutually antagonistic. If thou wilt side with me, not neglecting what I enjoin on thee and refraining from such foods as I shall forbid thee, then we shall be two against one and shall overcome the disease."

There are other sources that can be tapped to learn of the state of medicine, and amongst these are some most interesting biographical notes. In particular, there are some by the Amír Usáma, who lived at the time of the Crusades, and whose pictures of medicine at that time are both instructive and amusing. In the intervals of peace and even during the emergencies of war, there was a good deal of exchange of physicians, and the reports upon their relative knowledge and practice make excellent reading. But there is no time to quote these now, and it must be enough to tell of their existence. They contain more truth than the anecdotes, but this story has been more concerned with capturing the spirit in which Medicine was practised than in detailing a state of knowledge, and it is felt that anecdotes fit better into the pattern than would these stories of Usáma.

While Avicenna still lived, Europe was waking from five centuries of sleep and superstition, and she woke thirsty for knowledge. Constantine, the African, wandered through Araby, and with his acquired learning settled at Montecasino, and there set about translating Arabic works into Latin. At the medical school at Salerno, and through the endeavours of such men as Gerbert of Aurillac, or, as he later became, Pope Sylvester II, the knowledge of the Arabs began to be disseminated through Western Europe. And so the cycle is completed.

An attempt has been made to show how, with the decline of the Roman Empire, came the parting of the ways for Greek and Roman medicine; how the Church triumphed in the Roman world, and monastic medicine held sway from the 5th to the 9th century; how, while the West lay content in contemplation of the celestial world, there stirred in Arabia a spirit that sprang to life in the 7th century, and by its fierceness took the Saracen horde through half the world, creating the realms of Islam; how, amidst the splendour and poetry of the Courts of the Caliphs, there came first an era of acquisition and accumulation of knowledge through translation, and then an era in which Arab physicians came to lead the world in medicine; and lastly, how the wheel turned past its height and medical learning once more came back to Europe. It is a complete tale, a round tale, a tale of a journey that medicine took when she strayed into Araby, rested and returned.

THIS ENGLAND

As a torrent from the highland comes stemming down the years
Each drop of England's heritage was wrought in blood and tears,
And every bond and charter wherein our freedom lies
Was hammered on the walls of time with nails of sacrifice.

The mighty stones of Avebury stand up to tell their tale
Of ancient priests who darkened the doorways of the frail,
Then foundered in the silent flood that leaves these nameless things
Like brutal battered effigies of long-forgotten kings.

The roads ran out like flaring weals across this little land
To bring the warring eagles from their sunny southern strand;
Now the bricks they slowly crumble and the grass is over all
Where Romans shed their Roman blood and Hadrian flung the wall.

The likeness of some Wessex horse cut deep into the down
Had seen the glinting armour and the black invader's frown;
Yet windy heath and wood and fen each held a thousand eyes
Of little men who rise again for every one that dies.

The Mark was set on England, and the fiery Cross was waved,
And some were burned and branded, and many more were saved;
When the faith had lost its fury and the ore had lost its heat
The shining steel of Christian zeal lay forged at their feet.

When the ships of no returning from the cruel Nordic lands
With their slaying and their sacking swept in across the sands,
It was passing of the seasons that brought them to their knees
Where the slow rivers wander by the mills among the trees.

When the stern avenging Spaniards brought out their fighting line,
And the flaming beacons flickered up from Zennor to the Tyne,
Was it Drake or was it fortune in the wind that drove them forth,
That tore among the tattered sails and swept them to the north?

Of all our island dangers two Queens have known the worst;
On Elizabeth the Second falls the mantle of the First;
The symbol of the sceptre, the glory of the crown,
Have shared with common people their perils as their own.

For other storms have gathered and darker grows the sky,
And blood red is the star above an eastern Calvary;
But let this be remembered before that tomb is sealed—
Not for nothing have we struggled; not for nothing shall we yield.

E. J. A. ALMENT.

A CASE OF GAUCHERS DISEASE

History

Phillippe Charles Ewert Gaucher first described a 'Primary Epithelioma of the Spleen' in 1882. In 1900, Bovaird of New York stated that Gaucher's Disease was not neoplastic but an endothelial hyperplasia in the spleen, liver and lymph nodes. In 1907, Schlagenhaufer argued that the disease was a disorder of the reticulum cells of the lymphatic and haemopoetic systems. In the same year Moreland recognised the importance of the foreign substances in the production of the Gaucher cell. In 1916, Mendlebaum and Downey first suggested that the disease was a disturbance of lipoid metabolism, and in 1924, Lieb and Epstein, by chemical analysis of a Gaucher spleen, showed that the lipoid in the cell was Kerasin with some phosphatides.

Aetiology

A disease of lipoid metabolism in which the characteristic lipoid is found in various parts of the body in a typical Gaucher cell. This cell is thought to arise from the reticulum cells of the Reticulo-Endothelial System. The condition is therefore classed among the reticuloses with such similar disorders of the lipoid metabolism as Niemann-Pick Disease and the Hans Schuller Christian Syndrome.

Discussion

Gaucher's Disease is a familio hereditary condition commoner in females in the proportion of 2:1. The disease is found in three types, which are not separate entities but differ only in the main site in which the deposits occur. They are:—

i. The infantile type in which, in addition to the usual sites, the deposits are found in the pharyngeal tonsil and the Betz cells of the cortex. This form often produces a spastic paraplegia and is fatal in infancy. After the age of one year these tissues lose the ability to store Kerasin.

ii. The bony type in which the main deposits are in bone. The usual sites are the femur and the tibia, the vertebrae and ribs. In extreme cases a pathological fracture may occur. In the vertebral column a vertebra may completely collapse and be followed by the union of the two neighbouring intervertebral discs which are unaffected by the condition.

iii. The type in which enlargement of the spleen and liver dominate the picture.

In addition to the signs mentioned above there are others which are commonly found. These are:—

i. Deposits of Gaucher material in the deep lymph nodes; never in the superficial nodes.

ii. Pingueculae due to thrombocytopoenia on the nasal side of the sclera, uncommonly on both sides.

iii. Patches of yellow pigment in the skin mainly on the face, neck and hands. This does not occur in children.

There is no curative treatment for Gaucher's Disease but Splenectomy is often a good palliative measure. The indications for it are:—

i. A severe degree of anaemia and thrombocytopoenia.

ii. Interference with the function of other abdominal viscera by the enlarged spleen.

iii. The good physical condition of a patient who is hampered by the gross weight of of the spleen.

It has sometimes been observed that after splenectomy the bones become involved for the first time. The earliest sign of this is usually tenderness over the long bones and ribs. There is nothing to indicate that this involvement is caused by splenectomy.

Irradiation of the spleen produces only a temporary decrease in size.

Prognosis

This is difficult to give except in the infantile type which is fatal in the second or third year. The density of the Gaucher deposits and the number of sites involved bear no relation to the prognosis. The whole process is extremely chronic and may continue for ten, twenty or thirty years. Death is usually due to intercurrent disease which is often pneumonia; in infancy it is caused by cachexia.

The Patient

David G. Aged seven years. For the past three years his mother had noticed a gradual increase in size of his abdomen. In spite of the large abdomen David was symptom

free. He has led a normal active life and was captain of his football team.

Past History

Birth weight—7 lbs. 14 ozs. Normal delivery.

Previous illnesses — Whooping cough, Measles. He catches colds easily. He has never been abroad.

Family History

Mother and father both alive and well. They have no knowledge of a similar condition on either side of the family. David has a brother of 11 years and a sister of 7 months. Both are quite well.

Examination

Weight—47 lbs. 9 ozs. Height—3ft. 10ins. Temperature and respiration normal.

A cheerful healthy looking boy with a distended abdomen. He was thin, but not abnormally so. The skin of the anterior abdominal and thoracic walls showed a number of bluish enlarged vessels. No 'caput medusae'. Umbilicus elliptical with long axis transverse. The whole abdomen was rounded but appeared slightly more so in the left upper quadrant. Abdominal reflexes—normal.

Palpation

Whole of the left upper abdomen filled with a firm smooth tumour, not attached to the anterior abdominal wall. This tumour spread downwards and to the right from the left anterior costal margin. Two notches could be felt in its right border; one at the umbilicus and another midway between there and the costal margin. The tumour crossed the mid-line at the umbilicus. It did not move on respiration. Percussion showed the tumour to be continuous with the normal area of splenic dullness. Conclusion from the examination:—This tumour was a grossly enlarged spleen.

The liver was enlarged to two fingers breadths belows the costal margin. It was smooth and firm. No bruit was heard over either enlarged organs.

Urine

The first specimen showed a trace of albumen. Later—normal, except when David was taking aspirin, post operatively.

Special Investigations

Bleeding time	—3 mins.
Clotting time	—9 mins. Control 11 mins.
Serum protein	—negative.
Serum bilurubin	—6.75 gm %.
Van den Bergh	—less than 0.2 mgm %.
E.S.R.	—3 mm in first hour.
X-Rays of skeleton	—no bony abnormality.
WR and Kahn	—negative.
Red cell fragility	—normal.
Hb	—70% Haldane.
RBC	—4,200,000. Reticulocytes 0.1%.
WBC	—5,000. Distribution normal.

Oesophagoscopy and Sigmoidoscopy showed no varices.

Differential Diagnosis

This consists of a consideration of those conditions which produce gross splenic enlargement.

i. Chronic Congestive Splenomegaly or Banti's Disease.

ii. The Reticuloses.
   (a) Hodgkin's Disease.
   (c) Gaucher's Disease.
   (b) The Leukaemias.
   (d) Follicular Lymphoma.

iii. Blood Diseases.
   (a) Polycythaemia Rubra Vera.
   (b) Acholuric Familial Jaundice.

i. There were no signs of portal hypertension. In this condition, splenic enlargement may develop before any anaemia but there is always a leukopoenia.

ii. (a) Hodgkin's Disease produces constitutional symptoms which are absent in this case. There is no involvement of lymph nodes at any of the typical sites.

   (b) In the absence of any abnormal blood picture the leukaemias can be excluded. The one possible exception is Aleukaemic Leukaemia. Even with this condition it is unlikely that the blood count should remain normal for this length of time.

   (c) Gaucher's Disease. This is the most likely diagnosis even in the absence of other signs.

   (d) Follicular Lymphoma. This is the only neoplastic condition which produces a grossly enlarged spleen. The patient is out of the usual range of age incidence. There is, in addition, no involvement of superficial lymph nodes.

iii. (a) Polycythaemia Rubra Vera can be excluded at once from the appearance of the patient and the red blood count.

   (b) Apart from the large spleen there is no evidence of Acholuric Familial

Jaundice. David has never been jaundiced, has had no crises, and his red cell fragility is normal.

The diagnosis cannot yet be made with certainty but there are several procedures which would give the final answer. They are:—

i. Splenic Biopsy.
ii. Liver Biopsy.
iii. Marrow Puncture.
iv. Splenectomy.

Splenic Biopsy is dangerous owing to the ease with which the enlarged spleen may be made to bleed. Liver Biopsy is much safer

Treatment

Splenectomy by Mr. Hosford.

The spleen was smooth and pink. There was some free fluid in the peritoneal cavity. The Mesenteric Lymph nodes were slightly enlarged but not pathologically so. A liver biopsy was taken.

The spleen weighed 1,525 gm. Histologically the spleen and the liver showed the characteristic appearance of Gaucher's Disease.

We should like to thank Dr. Franklin for his permission to publish this case and for his help and encouragement in its preparation.

R. G. CHITHAM
M. A. PUGH.

MEDICINE AS RECORDED IN EDWARD BROWNE'S TRAVELS IN EUROPE

by JOHN L. THORNTON

The eldest son of Sir Thomas Browne (1605-1682) was born at Norwich in 1642, and was christened Edward. Educated at Norwich Grammar School and Trinity College, Cambridge, he graduated M.B. Cantab. in 1663. In 1664 he came to London and attended the lectures of Dr. Christopher Terne (1620-1673) at Barber Surgeon's Hall. Terne was Physician to Bart's, and in 1672 Edward Browne married his daughter Henrietta. Also in 1664, Edward Browne made his first trip to the Continent. At Paris he attended the lectures of Gui Patin (1602-1672) and other eminent teachers. In September he continued on to Montpellier, where he remained one month, before proceeding via Rome and Venice to Padua. In April 1665 he left Padua and retraced his steps.[1]

Edward Browne was elected a Fellow of the Royal Society in 1667, and the same year was awarded an M.D. at Oxford, but he resumed his travels in 1668. Journeying to Rotterdam from Yarmouth, he went on through Holland, Belgium, Germany, Austria and Hungary, spending some time in Vienna, before returning to England in 1669. He made a final trip to Cologne and the Low Countries in 1673.

Brown was elected a Fellow of the College of Physicians in 1675, and later served as Treasurer (1694-1704), and as President (1704-1708). He was appointed Physician to St. Bartholomew's Hospital on September 16, 1682, supported by a letter from the King, and held office until his death on August 28, 1708, at Northfleet, Kent, where he was buried.

Son of the eminent author of *Religio medici*, Edward Browne was himself well-read and keenly interested in everything he saw. During his travels abroad, letters from his father told him what to look for, and proved a constant source of good advice. Edward's journals recording his travels are of great interest, and the following items of medical significance are gleaned from two works published together in 1685 and 1687, contained in a volume in the Library.[2] There were also Dutch and German translations.

The *Travels in Hungary*, published in 1673 contains little of medical interest, but Browne mentions the daily practice of the physician at Procupie, in Bulgaria:

"They had also a physitian, who had some knowledge of simples, and ordinary compositions. His manner was to go into the market-place every morning, and to invite all persons who stood in need of his assistance, to resort unto him."

At St. Veit or St. Faith, formerly the chief city or Corinthia, and situated on the confluence of the Rivers Glan and Wunich, he mentions the prevalence of goitre, and also the association of the city with acute chorea, popularly known as Sydenham's chorea, or St. Vitus's Dance:

"We stayed at St. Veit, and had the divertisement of a Latine comedy at the Franciscan Convent, it was in May when the higher hills were covered with snow, but the lower were all green, full of fire and larch trees, it thundred and lightned very much, and as soon as it began they rang their Bells. Many here have great throats, some as big as their heads, many are blind, divers dumb and fools withall; without the town there is an hospital for such as have lost their voice, their wits, or are otherwise oppressed by their throats, many of them cover their throats, which otherwise are ill complexioned in cold weather. Men and women have them, the better sort of people which live well drink wine and good beer, are less subject to them. I saw bigger throats in these parts, then any I had observed in the Alpine parts of Savoy.

St. Veit whose name this place beareth was a zealous Christian who laboured much in the conversion of these parts, and was persecuted under Diocletian. Many churches and towns do carry his name in other parts of Europe, and the people have an opinion of St. Veit in the curing of that dancing disease called Chorea Sancti Viti."

At Clagenfurt, Edward Browne encountered a system of rough justice that was a little hard on the suspect:

"Among the odd customs of Corinthia there is an old one delivered of this place, that if a man were vehemently suspected of theft, they hanged him, and three days after judged of the fact; if he were found guilty thay let his body hang till it be corrupted, if otherwise, they took down the body, buried it upon the publick account, and said prayers for his soul."

Edward Browne's second volume of travels deals with his experiences in Holland, Germany and Austria, where he met several eminent men, and records his visits to places of medical interest. At Leyden he visited the schools of anatomy:

"In the Anatomy Schools are a very great number of skeletons. Two legs of an elephant. The skeleton of a young whale, of a horse, deer, cow, cat, fox, and many other animals; divers skeletons of men and women, some bodies preserved with their muscles, and one intire, the flesh, skin, and all parts defended from corruption. I saw also here what Monsieur de Bils* pretended towards the preservation of bodies, but more accurately afterwards at Dr. Ruisch's house at Amsterdam. The Physick-garden, although but small, is well filled with plants, where are also many other both natural, and artificiall curiosities to be seen, and many sorts of optick glasses."

At Haarlem he saw the home for aged men, and remarks on the cleanliness of the local hospital:

"The old mens house, or an hospital for sixty aged persons, is large and handsome; having a good quadrangle and a garden in it. The hospital also for the sick is very cleanly kept."

Amsterdam presented several interesting features, including hospitals for old men, for children, and for psychiatric cases:

"The *Weeshuis*, or Hospital for Children, where there are six-hundred orphans carefully looked after, and well educated.

The *Dolhuis*, or a house for such as are delirious, maniacal or melancholical of both sexes.

The *Gasthuis*, or Hospital for the Sick, being large, and hath a great revenue.

The *Mannenhuis*, or Hospital for old Men, and such as are no longer able to labour towards their own support."

"During my stay at Amsterdam, I had the opportunity of seeing divers learned men, and persons of note. Dr. Ruish† shewed us many curiosities in anatomy, as the skeletons of young children, and foetus's of all ages, neatly set together, and very white; the lymphatick vessels so preserved, as to see the valves in them. A liver excarnated, showing the minute vessels, all shining and clear. The muscles of children dissected, and kept from corruption: entire bodies preserved: the face of one was very remarkable, without the least spot or change of colour or alteration of the lineaments, from what might be expected immediately after death: he had then kept it two years, and hoped it would so continue. Dr. Swam-

* *Lodewyk de Bils* (1624-1670).

† *Frederik Ruysch* (1638-1731), *Professor of Anatomy at Leyden and Amsterdam, devised a method of injecting the vessels, which remains a secret.*

merdam* showed us divers of his experiments which he had set down in his treatise *De Respiratione*: and a very fair collection of insects brought from several countries; the Stagg fly of a very great bigness; an Indian scolopendria, or forty-foot; a fly called Ephemeron, and many other curiosities. Old Glawber† the chymist shewed us his laboratory: and we received much civility from Blasius** the physick professor who hath wrote a comment upon Vestingius."

At the English Church at Utrecht, Browne found specimens of the "unicorn's horn", and mentions its supposed virtues as an antidote against poisoning:

"There are also three unicorns horns, little differing in length: the longest being five foot and a half: I drank out of one of them, the end being tipp'd with silver, and made hollow to serve for a cup. These were of the sea-unicorn, or the horn or long wreathed tooth of some sea-animal much like it, taken in the northern seas; of which I have seen many, both in public repositories, and in private hands. Two such as these, the one ten foot long, were presented not many years since to the King of Denmark, being taken near to Nova Zembla; and I have seen some full fifteen foot long; some wreathed very thick, some not so much, and others almost plain: some largest and thickest at the end near the head; others are largest at some distance from the head: some very sharp at the end or point, and others blunt. My honoured Father Sir T.B. hath a very fair piece of one which was formerly among the Duke of Curland's rarities, but after that he was taken prisoner by Douglas in the wars between Sweden and Poland, it came into a merchant's hands, of whom my Father had it, he hath also a piece of this sort of unicorns horn burnt black, out of the Emperour of Russia's repositorie, given him by Dr. Arthur Dee, who was son to Dr. John Dee, and also physician to the Emperour of Russia, when his chambers were burned, in which he preserved his curiosities. I have seen a walking staff, a scepter, a scabbard for a sword, boxes, and other curiosities made out of this horn, but was never so fortunate as from experience to confirm its medical efficacy against poysons, contagious diseases, or any other evident effect of it, although I have known it given several times, and in great quantity. But of these unicorns horns no man sure hath so great a collection as the King of Denmark; and his father had so many, that he was able to spare about an hundred of them, to build a magnificent throne out of unicorns horns."

In Germany, Browne visited Altdorff, and mentions the Physick Garden there, and also the Anatomy School:

"The Physick Garden is handsome, and well stocked with plants, to the number of two thousand. Dr. Hoffman* the Botanick and Anatomick Professour, shew'd me many of the most rare of them; and presented me with divers. The Anatomy School is not large; yet the only one in those parts of Germany: and they have divers curiosities preserved in it, as the skeleton of a hart, of a horse, of a man, of a bear bigger than a horse."

Passing on to Austria, Edward Browne made Vienna his headquarters for a considerable period, and the following observations were made during his stay there:

"During my stay at Vienna, I went unto a publick anatomy of a woman that was beheaded: the lecture lasted so long, that the body was nineteen days unburied. It was performed by a learned physician, Dr. Wolfstregel, who read in Latin to the satisfaction of all persons. What I most particularly observed therein was this, the pyramidal muscles very plain and large; the uterus larger than is usually observed; the cartilago ensiformis double; the lungs very black; the eye was very well shown; he produced an artificial eye of ivory, and another large one of pastboard and paper, contrived and made by himself; the muscles of the pharynx, larynx, os hyoides, and the tongue, after their dissection, he reduced very handsomely into their proper places again to shew their natural situation and position. The Anatomy-Theatre was of capacity to receive above an hundred persons; and according to the custome of other places, to avoid impertinent spectators, a piece of mony was given for admission. Of anatomy-theatres, until of late, there have

* *Jan Swammerdam* (1637-1680), *an early worker with the microscope, became renowned for his researches on entomology.*

† *Johann Rudolf Glauber* (1604-1668), *the eminent chemist.*

** *Gérard Blaes* [*Blasius*] (1626-1682), *who achieved prominence for his studies in comparative anatomy.*

* *Moritz H. Hoffmann* (1622-1698).

been few in Germany, or none. And when I was in the Anatomy-School at Altorff [*sic*], near Nurenburg, that learned and civil professor, Dr. Mauritius Hoffmannus, told me that the same was the first in Germany."

"In treason and high crimes they cut off the right hand of the malefactor, and his head immediately after. I saw a woman beheaded sitting in a chair, the executioner striking off her head with a fore-blow, she behaved herself well, and was accompanied unto the market-place by the Confraternity of the Dead, who have a charitable care of such persons, and are not of any religious order, but lay men, among whom also in this place there are many fraternities and orders; as of the Holy Virgin, of the Holy Cross and others. Another person also executed after the same manner; as soon as his head fell to the ground, while the body was in the chair, a man ran speedily with a pot in his hand, and filling it with the blood yet spouting out of his neck, he presently drank it off, and ran away; and this he did as a remedy against the falling sickness. I have heard of some who have approved the same medicine; and heard of others who have done the like in Germany. And Celsus takes notice, that in his time some epileptical persons did drink the blood of the gladiatours. But many physicians have, in all times, abominated that medicine. Nor did I stay afterwards so long as to know the effect thereof, as to the intended cure. But most men looked upon it as of great uncertainty: and of all men the Jews, who suffer no blood to come unto their lips, must most dislike it.

At Presburg they have a strange way of execution, still used at Metz, and some other places, by a maid, or engine like a maid finely dressed up with her hands before her. The malefactor salutes her first, and then retireth. But at this second salute she openeth her hands and cuts his heart in sunder."

He also notes the custom of giving children trinkets at Christmas:

"They have a custome upon St. Nicholas-day to put some small gift into the childrens shoes; among other things they put in medals and dollars made of paper and flower gilded and silvered over, yet scarce worth a penny. They sell trochies or tablets in the markets, made of the pulpe of the fruit of hip-briar, made sharp with spirit of sulphur, very refreshing. Some carry about them a thunder-stone, as a defence again thunder; and they rub their childrens gums with a wolfs tooth instead of coral."

Browne comments on the popularity of the Jewish physicians in Vienna:

"I have seen their circumcision at Rome, Padua, and other parts. Their physicians ordinarily profess great skill in urines; and the common people resort unto them rather than unto Christians, and are so credulous, and have such an opinion of them, that they might be made to believe they have some old receipts of King Solomon."

Finally, he makes some shrewd comments on the Germans as a nation, which have a modern ring, and stamp our traveller as a keen observer of human nature:

"Germany is a great hive of men, and the mighty destruction of men made by the last German wars, and by the plague is so repaired, that it is scarce discernible. They are fruitful, and full of children: they are not exhausted by sea, colonies sent forth, or by peopling American countries; but they have some consumption by wars abroad, when they be at peace at home: few wars being made in other parts of Europe, wherein there are not some regiments of Germans; the people being naturally martial, and persons well descended, very averse from a trading course of life."

Although Edward Browne achieved high office in his profession as a physician, he contributed nothing original to its literature. Perhaps he was overshadowed by the fame of his eminent father; or maybe his extensive travels, and the duties of his various offices, left him little time for original research, apart from his early investigations into comparative anatomy. His travel books, however, were very popular during the years immediately following their publication, and remain as interesting records of the seventeenth century peregrinations of a person with an insatiable curiosity.

References

1. Browne, Edward. Journal of a visit to Paris in the year 1664, by Edward Browne. Edited by Geoffrey Keynes. *St. Bart's Hosp. Rep.*, 56, 1923, pp. 1-34; portrait.
2. Browne, Edward. *A brief account of some travels in Hungaria, Servia, Austria, Styria, Corinthia, Carniola and Friuli*, [*etc.*], London 1673 [Keynes 509]. And, *An account of several travels through a great part of Germany in four journeys*, [*etc.*], London, 1677 [Keynes 510].
3. Keynes, Geoffrey L. *A bibliography of Sir Thomas Browne, Kt., M.D.*, Cambridge, 1924.

SPORT

Cricket Results: 1st XI

Saturday, 1st May

Bart's v. U.C.S. Old Boys—Lost.

U.C.S. Old Boys 177 for 4 dec.

Bart's 121 (A. Murley 31).

Sunday, 2nd May

Bart's v. London House C.C.

Match Drawn—Rain.

London House 132-5 Dec. (J. H. K. Taylor 3-42).

Bart's 67-7.

Saturday, 8th May

Bart's v. R.A.M.C. C.C.

Match Drawn.

Bart's 99.

R.A.M.C. 92-5 (F. Winton 4-25).

Sunday, 9th May

Bart's v. Hampstead C.C.

Match Drawn.

Bart's 196-6 Dec. (J. R. Nicholson 102 not out, F. D. C. Ford 37 not out).

Hampstead 127-7 (F. Winton 4-20).

Sunday, 16th May

Bart's v. Romany C.C.

Match Drawn.

Romany C.C. 175-9 Dec. (F. Winton 3-49).

Bart's 117-8 (B. Gillett 32).

Saturday, 22nd May

Bart's v. Balliol College Oxford C.C.—Lost.

Bart's 210-9 Dec. (A. P. Marks 59, D. Roche 36, D. Rosborough 39 not out).

Balliol College 211-4.

Sunday, 30th May

Bart's v. Riddells Rovers—Won.

Riddells Rovers 82 (A. C. S. Bloomer 3-17, J. H. C. Taylor 3-9).

Bart's 83-1 (J. R. Nicholson 43 not out, A. Murley 36 not out).

EXAMINATION RESULTS

UNIVERSITY OF LONDON

SPECIAL SECOND EXAMINATION
March, 1954

Burles, P. G.
Costley, S. R.
Graham-Evans, J. N.
Lemon, J. H.
Martin, J. M.
Simpson, R. I. D.
Thomas, A. A.
Watts, N. M.

Cochrane, T. D.
Ellison, J. A.
Grasset-Molloy, G. J. M.
Lloyd, A. V. C.
Parsons, D. F.
Tallack, J. S. T.
Thomas, S.
Wilson, J. A.

Coltart, N. E. C.
Garnham, J. C.
Laurent, J. M.
Marston, M. S.
Plumptre, A. M. M.
Thirlby, J. M.
Tresidder, A. M.

CONJOINT BOARD
FINAL EXAMINATION

April, 1954

Pathology

Wyner, S. E. A.
Brady, J. P.
Graham, M. A. H.
Ogden, W. S.
Robinson, M. R.
Aldous, I. R.
Clare, K. A.
Bartlett, D. J.
Smith, G. W. T.
Barnes, J. M.
Bourne, W. R. P.
Cunningham, G. A. B.
Gawne, E. F. D.
Winton, F. W.

Medicine

Wyner, S. E. A.
Jones, H. D.
Kneebone, J. M.
Pagan, R. T.
Fieldus, E. R.
Reid, K. M.
Lindop, P. J.
Forget, P. Y. N.
Kellett, P.
Jones, A. R.

Surgery

Taylor, R. C.
Lindop, P. J.
Godwin, M. H.
Jones, H. D.
Jones, A. R.
Ogden, W. S.
Kellett, P.
Cory-Wright, O. M.
Smith, G. W. T.

Midwifery

Zilliacus, O. J.
Jones, H. D.
Mackay, A.
Fieldus, E. R.
Reid, K. M.
Godwin, M. H.
Forget, P. Y. N.
Fletcher, L. O. A.

The following have completed the examination for the Diplomas M.R.C.S., L.R.C.P.

Jones, H. D.
Lindop, P. J.
Reid, K. M.
Jones, A. R.
Kellett, P.
Godwin, M. H.

FIRST EXAMINATION

March, 1954

Anatomy

Costley, S.R.

Physiology

Costley, S. R.

Pharmacology

Graham, M. A. H.
Ellis, C. D'A.
Cairns, D. A. O.
Arthur, T. I. F.
Nerney, J. M.
Clare, K. A.
McDonald, P.

UNIVERSITY OF LONDON
M.D. EXAMINATION

April, 1954

Turton, E. C.

HOSPITAL APPOINTMENTS

The following appointments to the Medical Staff take effect from the dates indicated:

Dr. Spence's Firm
Dr. Maurice F. Goodbody to be Junior Registrar for one year from the 1st July, 1954 (vice Mr. B. B. Reiss).

Children's Department
Miss J. Cook to be Junior Registrar for one year from the 1st July, 1954 (vice Miss B. P. Melhuish)

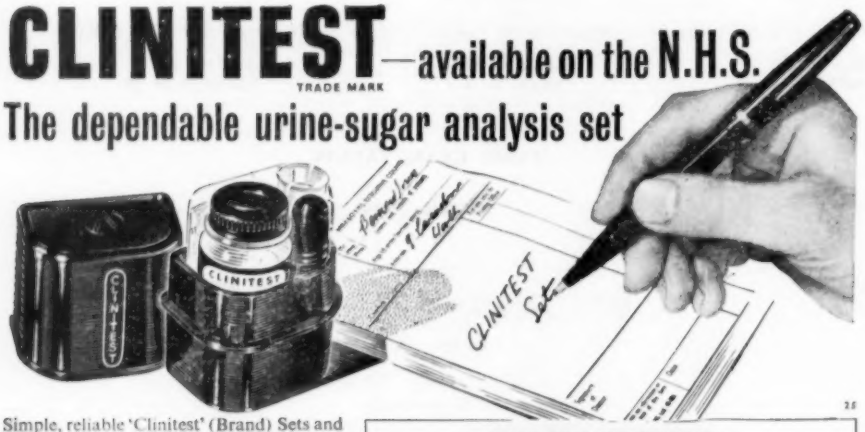
Department of Psychological Medicine
Dr. P. F. Johnson to be part-time Associate Chief Assistant (vice Dr. E. A. Burkitt).

E.N.T. Department
Mr. R. F. MacNab Jones to be Senior Registrar for a period of four years from the 1st May, 1954 (subject to annual re-election).

Ophthalmic Department
Mr. L. G. Fison to be Senior Registrar for a period of four years from the 1st June, 1954 (subject to annual re-election).

Gynaecological and Obstetrical Department
Mr. J. D. Andrew to be Senior Registrar from the 1st April, 1954 (subject to annual re-election).
Mr. G. Shawe to be Surgical Casualty Registrar for a period of one year from the 1st June, 1954.

CLINITEST—available on the N.H.S.
TRADE MARK
The dependable urine-sugar analysis set



Simple, reliable 'Clinitest' (Brand) Sets and Reagent tablets, essential in modern diabetic treatment, comply with the official specifications for appliances and reagents for urine-sugar analysis which may be prescribed on Form E.C.10. For accuracy and convenience this one-minute, no-heating, copper-reduction tablet test is unrivalled. The clear, unclouded colours of the test, easily matched against the sharply defined 'Clinitest' colour scale, give patients every confidence in their readings, eliminating many unnecessary visits to the practitioner.

CLINITEST
TRADE MARK
Approved by the Diabetic Association Medical Advisory Committee
Complete Set, including 36 tablets . . . 10/-
Refill bottles (36 tablets) 3/6
Supplies always available at all good-class chemists. Medical literature available on request to the sole distributors
DON S. MOMAND LTD · 58 ALBANY STREET, LONDON, N.W.1
Manufactured by Miles Laboratories Ltd., Bridgend, South Wales, under licence from Ames Company, Inc.

BOOK REVIEWS

ENDOCRINE DISORDERS IN CHILDHOOD AND ADOLESCENCE, by H. S. Le Marquand, F. H. W. Tozer and W. J. Tindall. 2nd Edition. English Universities Press, 1954. pp. 332. 32/6.

The first edition of this book was pioneer work in a field which has developed and expanded tremendously since the time it was published. In addition, in 1943, the conditions under which any book could be published were most difficult.

These three factors alone, the progress in endocrinology, the need for such a book, and the improved conditions of publishing both justified and necessitated the almost complete rewriting of it. The changed conditions also demand a more critical approach on the part of the reviewer.

The fact that the book is the product of a County Hospital is certainly a source of satisfaction, but it has also some disadvantages. One of them, mentioned by the authors in the preface to the 2nd edition, is that many patients could not be investigated by the latest methods, as special facilities and assistance were lacking. Another is, that it reads in parts more like the collected clinical notes of a very keen team of observers, but lacks the careful layout, the meticulous planning, the precise definitions one finds, for example, in another recent endocrine textbook.

The book is well illustrated, but the same criticism applies: the definitions given are too vague for inclusion in a textbook to which reference should be made by the clinician when in doubt; for example case 99 is described (in the illustration) as "Possible mild hypopituitarism" (Plate 10A); case 126A (Plate 12A) as "mild hypopituitarism."

To sum up, this is a valuable book for the expert and connoisseur, and a most laudable effort for a County Hospital, but perhaps not ideal for those not well acquainted with the subject.

PRELIMINARY ELECTRICITY FOR THE PHYSIOTHERAPIST, by Brenda Savage, M.Sc., M.C.S.P. Faber & Faber, 21s.

This book is the first of its kind to attempt to cover this particular section of the syllabus of the Chartered Society of Physiotherapy.

It is attractively set out, the style is clear and the analogies well chosen. Certain sections deserve particular mention for there clarity; The introduction on atomic structure and the nature of electricity, the chapter on Magnetism and most of those on short wave diathermy and Radiations.

There are, however, a considerable number of errors and omissions throughout the text and it might be considered rather overdogmatic. This is particularly unfortunate in a text book for students and may lead to some confusion.

In later editions when considerable revision has been done this should prove a useful book.

FREDA WAREHAM.

A SUMMARY OF MEDICINE FOR NURSES, by R. Gordon Cooke, M.D., Faber & Faber.

At examination time "A Summary of Medicine for Nurses" will be in great demand. It is written in note form, and so makes no pretension to literary style, but a very great deal of information has been compressed into it.

EMOTIONAL FACTORS IN SKIN DISEASE, by Eric Wittkower and Brian Russell. Cassell and Company Ltd., London, 1953. pp. 214. 32s. 6d.

"It is amazing", Professor Cameron says, "how far medicine has been able to progress on the basis of the concept of the human organism as being essentially inanimate" (p. vi). This book, consisting mainly of papers previously published, attempts to combine dermatology and psychiatry by including a chapter on "Development, Neuroanatomy and Physiology of the Skin". Such an undertaking in just over 200 pages must mean many omissions. There is also a confusion of theory with clinical observation and hypothesis with fact. The beginner will be left with the dangerous impression of more being known than actually is known, and specialists will miss discussion of other work and points of view. The book has other faults.

Diabetes is classed as a "psychosomatic disorder" (p. 92) and epilepsy under "gross psychological disorders" (p. 126). Psychotherapy can hardly be compared to "making a needle on a much-worn gramophone record play in the proper groove again" (p. 6), or simply distinguished as "covering" or "uncovering" (p. 39). Description of patients as "emotionally immature" (p. 8), "impassive" (p. 10), "over-dependent" (p. 39), and having "a perverse need for appealing for sympathy" (p. 21), are moralistic judgments not calculated to increase respect for the mentally ill, nor advance understanding of psychodynamics. It is frightening and hardly psychiatric to read that in sleep man's "uncivilised ancestry reasserts itself" (p. 31). On page 37 it is stated that "At the hypothalamus irrevocable decision takes place between active or passive, sympathetic or parasympathetic response". Does it? "Psychodermatoses" (p. 48) is a particularly unfortunate term. Psychosomatic skin disorders are as little psychiatric disorders of the skin as they are dermatological disorders of the mind.

This book may be taken as the latest and perhaps last attempt at understanding psychosomatic illness on the basis of personality assessment and typing, an approach now condemned from many sides. The choice of descriptive terms alone shows why. Sufferers from eczema are classed as "resentful", "self drivers", "limelight seekers", "stay-at-homes", and "wallflowers" (pp. 94, 95), and from their study of seborrhoeic dermatitis the authors conclude that "'Bashful' figures prominently in the brotherhood of seborrhoeics whereas 'Happy', 'Grumpy', and 'Dopey' were not too common" (p. 126). Such findings hardly provide a basis for scientific discussion although they may appeal to Disneyites.

IDA MACALPINE.

INSURANCE

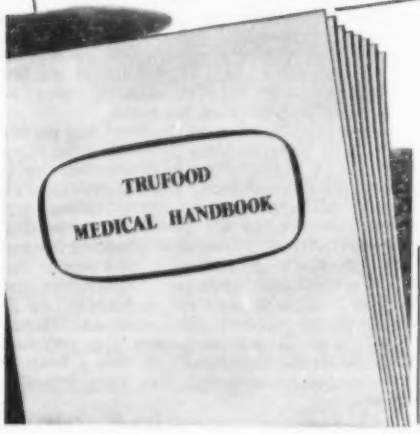
TELEPHONE

WHItehall 6161 where there is an efficient organisation ready to deal with all your enquiries

CAR & GENERAL

INSURANCE CORPORATION LTD.
83 PALL MALL, LONDON, S.W.1

Contrary to common belief there are important differences between infant milk foods



Practical details of the range of Trufood milks are given in the

TRUFOOD MEDICAL HANDBOOK

This Trufood Handbook for the Medical Profession, a convenient, pocket-size publication, gives analyses, characteristics and feeding tables for all Trufood products for infant feeding. There is also a section of tables and general data on obstetric and pædiatric subjects for quick reference. A free copy of this book will be sent to any doctor or student on receipt of the coupon below.

To Trufood Professional Information Service, Green Bank, London, E.1. Please send me a copy of your Medical Handbook.

Name .....

Address .....

.....

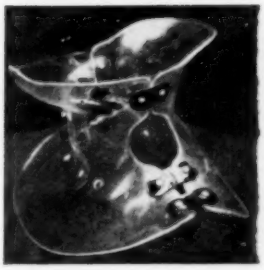
.....

TFD 79-150-100

ESTABLISHED IN 1849

Old in experience but young in ideas

M. MASTERS & SONS LTD.
240, New Kent Road SE.1.



THIS IS OUR PLASTIC CERVICAL COLLAR, LIGHT IN WEIGHT HYGIENIC TO WEAR AND NEAT IN APPEARANCE

We manufacture all types of **ORTHOPAEDIC & SURGICAL APPLIANCES** *and are anxious to cooperate with doctors and surgeons to design the correct appliance for the individual patient.*

Phone: RODNEY 3441/2
ALSO AT LIVERPOOL AND BRISTOL

THE WORLD'S GREATEST BOOKSHOP

FOYLES
FOR BOOKS

All new Books available on day of publication. Secondhand and rare Books on every subject. Stock of over three million volumes.

Subscriptions taken for British, American and Continental magazines and we have a first-class Postal Library.

Foyles have depts for Gramophone Records, Stationery, Handicraft Tools & Materials, Music.

We BUY Books, Stamps, Coins

119-125, CHARING CROSS ROAD, LONDON, W.C. 2.

Gerrard 5660 (16 lines) * Open 9—6 (inc. Sats.)
Two minutes from Tottenham Court Road Station

THE MEDICAL DEFENCE UNION Ltd.

INCORPORATED 1885 *Registered Office* Telephone EUSton 4244

TAVISTOCK HOUSE SOUTH, TAVISTOCK SQUARE, LONDON, W.C.1.

Secretary: ROBERT FORBES, M.B., Ch.B.

IMMEDIATELY AFTER QUALIFICATION, YOU should take steps to apply for membership of The Medical Defence Union to secure protection against legal actions arising out of the pursuit of your profession.
Every Medical and Dental practitioner, from the humblest to the most distinguished, requires the protection of a defence organization. Membership is a Guarantee of Security.

THE INDEMNITY afforded to members in respect of a case undertaken by The Union is an invaluable feature in view of the large damages and costs that can result from an adverse verdict.

PROTECTION is also provided on special terms to Medical and Dental practitioners resident and practising overseas.

ENTRANCE FEE 10s. ANNUAL SUBSCRIPTION £1 for each of the first three years for newly qualified entrants, **£2** each year for members of more than three years standing. (No entrance fee payable by candidates for election within one year of registration with General Medical Council or the Dental Board.)

MEMBERSHIP EXCEEDS 40,000

Forms of application for membership obtainable from the Secretary.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQUARE, LONDON, W.C.1

G. E. Oates, M.D., M.R.C.P., London

POSTAL COACHING FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES GAINED BY OUR STUDENTS 1940-1953.

Qualifying Exams.	701
M.R.C.P. (London)	219
Primary F.R.C.S. (Eng.)	178
Final F.R.C.S. (Eng.)	220
M. and D. Obst. R.C.O.G.	255
D.A.	203
D.C.H.	150
F.R.C.S. (Edin.)	30
M.D. (Lond.)	52
M.D. by Thesis	Many Successes

PROSPECTUS, LIST OF TUTORS, Etc., on application to :—Dr. G. E. OATES, 17 RED LION SQUARE, LONDON, W.C.1. (Telephone HOLBORN 6313)

ROYAL NAVAL MEDICAL SERVICE

Candidates are invited as MEDICAL OFFICERS IN THE ROYAL NAVY preferably below 28 years. They must be British subjects whose parents are British subjects, and also be medically fit. No professional examination will be held but an interview will be required. Initial entry will be for four years' short service after which gratuities (tax free) are payable, but permanent commissions are available for selected short service officers.

Officers transferred to permanent commissions will be paid taxable grants on completion of one year's service, amounting to £1,500. Consideration will be given to the grant of up to a maximum of seven years antedate of seniority in respect of approved periods of service in recognised civil hospitals and for similar experience elsewhere. Previous medical commissioned service will be allowed to count in full and half duration will be allowed to count in respect of non-medical commissioned service.

For full details apply :—
MEDICAL DIRECTOR-GENERAL
ADMIRALTY, LONDON, S.W.1.

When you receive a cheque

. . . what happens? If you must seek out some accommodating person in order to obtain the cash, isn't it about time you had a bank account of your own? It's very easy to become a customer of the Westminster Bank. Modest means are no bar and it is very certain that you would find your bank account helpful in dealing with personal expenditures, grants and allowances. Any branch of the Westminster Bank will be glad to explain the simple procedure.

WESTMINSTER BANK LIMITED

PADDINGTON (MARBLE ARCH) BRANCH
1 Connaught Street, Edgware Road, W.2
SUSSEX GARDENS (PADDINGTON) BRANCH
168 Sussex Gardens, W.2

CASSELL MEDICAL BOOKS

SHOULDER LESIONS

H. F. MOSELEY, M.A., D.M., M.CH., F.R.C.S., F.A.C.S.

A revised and enlarged edition of this comprehensive and authoritative reference book on the diagnosis and treatment of diseases and injuries of the shoulder. The concise text, combined with a profusion of large-scale illustrations, makes vividly clear the anatomy and pathology of each lesion discussed, as well as the recommended techniques of repair By focusing attention on the clinical aspects of each problem, avoiding theoretical distractions, and making maximum use of illustrations for clarity, the author has prepared a monograph that will supply quick, accurate help when shoulder problems arise in practice.

340 pp. Illustrated. 90/-

37/38 St Andrew's Hill, London, E.C. 4

DIETS FOR RESEARCH ANIMALS

The makers of Blue Cross Animal Feeding Stuffs supply most of the leading British medical schools and research stations and many American Organisations with specially formulated diets for rats, mice, rabbits, guinea pigs, and other animals kept for research. The diets are scientifically prepared from freshly-milled ingredients, in the Mills of Joseph Rank Ltd., and Associated Companies.

Enquiries are invited from other medical schools, research centres and laboratories

BLUE•CROSS

Balanced Rations

By Appointment
Joseph Rank Ltd. Manufacturers of Animal Feeding Stuffs to the late King George VI

JOSEPH RANK LTD., MILLCRAT HOUSE, EASTCHEAP, LONDON, E.C.3. Telegrams: MINCING LANE, 3911

MOTION SICKNESS

As a result of an evaluation* of a number of drugs, including other antihistaminics, for their ability to protect against motion sickness it was shown that the active constituent of Ancolan was 'the only compound that protected when given but once daily'.

(Journal of Pharmacology and Experimental Therapeutics, Dec. 1952, p. 376)

Its advantages are—LONG DURATION OF ACTION · EXCEPTIONALLY WELL TOLERATED

ANCOLAN TRADE MARK

Tablets containing 25 mg. mealozine dihydrochloride

DOSAGE: *1 or 2 tablets 1 hour before commencement of journey*

Basic N.H.S. prices: Bottles of 25 tablets 3/8 and 250 at 32/6

Descriptive literature is available on request

THE BRITISH DRUG HOUSES LTD. (Medical Department) LONDON N.1

Anct/B/841

Printed by The Encore Press, Ltd. 255/7 Liverpool Rd., N.1.